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Hearing Date: 8/11-13/04
Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER: 5-04-192 (Brightwater)

APPLICANT: **Hearthside Homes/Signal Landmark**

AGENT: **Ed Mountford, Hearthside Homes/Signal Landmark**
Dave Neish, Culbertson, Adams & Associates
Susan Hori, Mannat, Phelps & Phillips

PROJECT LOCATION: 17201 Bolsa Chica Road, (Bolsa Chica Mesa)
Bolsa Chica, Orange County

PROJECT DESCRIPTION: Subbdivision of an existing parcel into a residual parcel (lower bench) and on the remaining 105.3 acres, located primarily on the upper bench, subdivide into a 379-lot private residential community through the approval of Vesting Tentative Tract Map 15460. The proposed project also includes the construction of 379 single-family homes in a guard-gated community; a 2.5-acre private recreation center; a 2 million gallon underground water storage reservoir and above ground pumping facility; and other associated infrastructure. A 28-acre upland habitat park, located along the gradual slope between the upper and lower benches, containing 30 public parking spaces, a Class 1 bicycle/hiking trail, bike racks, and interpretive exhibits, is also proposed. The applicant also modified the project description to propose to construct a total of 114 (unstriped) public parking spaces within the new 20 feet of public right-of-way dedication along the south side of Los Patos Avenue, adjacent to the on-site 30-foot-wide greenbelt.

A series of constructed wetlands and a 1.3-acre detention basin (which is also a part of the residential water quality management plan) is proposed to be located in the upland habitat park. Grading to carry out the proposed development consists of 330,000 cubic yards of cut, 300,000 cubic yards of fill and 30,000 cubic yards of overexcavation.

In addition to the creation of the remainder or residual parcel on the lower bench through the approval of VTTM 15460, other development proposed on the lower bench includes the translocation of Southern Tarplant from the upper bench through the implementation of the Translocation Plan Southern Tarplant (Centromadia

Parryi ssp. Australis) Brightwater Development Project, Bolsa Chica Mesa, Orange County, California, LSA, May 1, 2003, as approved by the Department of Fish and Game.

STAFF NOTE:

On July 13, 2004, Commission staff received a letter from the applicant dated July 12, 2004, requesting a revision to the project description for the proposed remainder (or residual) parcel being created on the lower bench of the Bolsa Chica Mesa through the proposed approval of VTTM 15460**.** The letter states that it is being submitted partially in response to the Commission staff's previous request that the applicant identify an intended use for the remainder parcel, noting that the proposed tentative tract map simply indicated that the parcel was "Not a Part" of the proposed subdivision and no use was proposed. The letter requests that the project description of coastal development permit application 5-04-192 be amended to reflect that the remainder parcel is within the 103 acres covered by the (enclosed) Purchase and Sale Agreement and Escrow Instructions, and is proposed to be sold to the State of California for conservation purposes (Exhibit 6).

The letter also stated that the draft Purchase and Sale Agreement and Escrow Instructions between Signal Landmark and the State of California for the acquisition of 103 acres on the Bolsa Chica Mesa for $65 million, was being submitted pursuant to our request for information concerning the lower bench. Apparently, the matter will be heard by the WCB on August 12, 2004. The letter did not, however, state that the applicant is revising the project description to include all of the applicant's holdings on the lower bench of the Bolsa Chica Mesa in coastal development permit application 5-04-192 as staff had previously requested on several occasions during the coastal development permit application review process that began November 6, 2002 with the submittal of the prior application 5-02-375.

Commission staff has been aware of the applicant's on-going negotiations with the Department of General Services and the WCB for several months. Therefore, staff accommodated the applicant's request to postpone the original Brightwater development project application 5-02-375 from the February 2004 Commission meeting in San Diego to facilitate the on-going negotiations. However, staff informed the applicant that they had to first waive their right to a Coastal Commission final action on application 5-02-375 within 180 days of filing, since the application had been filed on September 24, 2003 and the only remaining hearing within the 180 day deadline would be a non-local hearing in Monterey in March. After receipt of the applicant's waiver of time limits from the required Commission final action on application 5-02-375, the application was then tentatively set for the Commission's June meeting in San Pedro. When the applicant requested a further postponement from the June Commission meeting to accommodate continued negotiations, staff informed the applicant that the Permit Streamlining Act does not allow postponements beyond a maximum of 270 days from the filing of a coastal development

permit application. Staff suggested that Hearthside Homes withdraw application 5-02-375 and request a waiver of the six-month waiting period to allow an immediate reapplication.

By letter dated May 13, 2004 and received in the Commission office on May 17, 2004, the applicant withdrew application 5-02-375 and requested that the Executive Director waive the six-month waiting period to reapply for the same project. On June 4, 2004, Commission staff, on behalf of the Executive Director, honored the request, finding that the applicant's on-going negotiations regarding the sale of the lower bench for conservation purposes, to be good cause. On May 21, 2004, the applicant submitted application 5-04-192 and requested that all plans and supplemental material from the previous application be considered for the new application[1]. The applicant requested that the new application be set for the Commission's August hearing in San Pedro. When staff agreed to waive the six-month waiting period, staff reiterated that the staff recommendation and findings would be based on the formal project description, as approved by the local government and other agencies, as submitted in the previous (5-02-375) application and as modified in the new application[2]. The importance of this discussion was that the applicant was asking staff to put the application on the August Commission agenda while negotiations were still on going and were not anticipated to be concluded in time for sale to be acted on by the WCB prior to the date that the Commission staff reports for the August hearing had to published. As it is an integral part of the Bolsa Chica ecosystem and previous assessments, the disposition and treatment of the lower bench would be a critical factor in developing a staff recommendation. Staff did however agree at that time to add a note to the staff report to inform the Commission of the results of the negotiations, any further revisions to the project description made by the applicant, and explain how the sale of the lower bench for conservation purposes, were it to occur, would change the staff recommendation concerning certain biological impacts of the project, provided the coastal development permit application was amended to include all of the applicant's holdings on the lower bench of the Bolsa Chica Mesa.

Because the applicant has chosen not to modify the project description to include all of their holdings on the lower bench of the Bolsa Chica Mesa in the coastal development permit application before the Commission, there is nothing for staff to comment on since the lower bench of the Bolsa Chica Mesa is not before the Commission, with the exception of the proposed creation of the remainder parcel that is included in the local government

[1] The applicant acknowledged the need for an updated mailing list and envelopes given the nearly 2 year period since the previous application was submitted. The applicant updated the mailing information and submitted a new fee. Staff agreed to file the new application with the submittal of these items. The application was therefore filed on the date of submittal, May 21, 2004.

[2] The applicant amended the project description of the original application 5-02-375 on April 16, 2004 to include the off-site improvement of Los Patos Avenue to accommodate (unstriped) parking for 114 cars and landscaping. Also, on June 11, 2004 the applicant submitted a ground squirrel survey pertaining to potential alternate burrowing owl habitat elsewhere on the mesa. With the exception of these two changes to the project description, the applicant submitted no other project revisions until the July 13, 2004 letter requesting only that the proposed lower bench remainder (residual) parcel approved through VTTM 15460 be added to the project description.

action in the approval of VTTM 15460. The applicant owns a total of 103.2 acres on the lower bench, including the remainder parcel. However, only the remainder parcel is before the Commission. It constitutes only 11-16% of their ownership on the lower bench, which is the only portion of the lower bench that is included in this application[3]. The staff recommendation with regards to the proposed lower bench remainder parcel is discussed below.

Regardless of the disposition of the lower bench, staff believes the Brightwater development project, as currently proposed, causes the following significant adverse impacts: (1) Southern Tarplant ESHA surrounding the seasonal wetlands near Los Patos Avenue; (2) the loss of the burrowing owl ESHA in the vicinity of the proposed detention basin; (3) the encroachments into the applicant's proposed (reduced) 100 ft. Eucalyptus grove buffer and the Eucalyptus ESHA itself for required on-going fuel modification for the adjacent residential lots and encroachments of park related development (portions of the entry road, parking spaces and portions of the trail); and (4) the significant landform alteration (up to a 30 foot high fill slope) proposed at the current bluff edge overlooking the wetlands. Further, the proposed project provides grossly inadequate public access and public recreation opportunities due to the prohibition of public vehicular, pedestrian and bicycle access into the guard-gated residential subdivision to facilitate the use of the proposed public upland habitat park and scenic trail.

Commission staff is recommending denial of the proposed Brightwater. The decision to recommend denial, as opposed to approval with special conditions to address the above Coastal Act inconsistencies, was made by staff considering that the extent of necessary changes to bring the project into conformance with the Coastal Act would result in a significant redesign of the project. In addition, on several substantive areas, the applicant expressed no willingness to consider change. A discussion of the necessary changes to bring the project into conformance with the Coastal Act is found in Section J, Alternatives, of this staff report. The level of change that is necessary to bring this project into conformance with the Coastal Act is so significant that the project must come back to the Commission in a public hearing forum.

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[3] The exact acreage of the remainder (or residual) parcel proposed to be created through the approval of VTTM 15460 is in dispute. The residual parcel is that portion of existing Parcel 2 created by Certificate of Compliance No. CC 92-01. The applicant has stated and submitted correspondence that says the parcel is 11.8 acres in size. Additionally, the approved vesting tentative tract map (VTTM) contains a notation that says "REMAINING PROPERTY N.A.P. [not a part] 11.75 Ac". However, the VTTM does not show the location of this parcel nor its shape. The Orange County Subdivision Committee approved the VTTM on May 29, 2002. However, the subdivision approval does not mention the remainder or residual parcel at all and refers only to the 105.3-acre portion of the existing Parcel 2. When staff incompleted the original application, the applicant was requested to provide additional information concerning the proposed residual parcel that would be located on the lower bench. At that time, and up until the present time, the applicant disagrees that the creation of the parcel constitutes development because no grading or construction is being proposed on the parcel. However, the applicant finally provided a graphic showing the proposed lower bench remainder parcel (Exhibit 5) and also provided it electronically in the format of a shapefile. Commission staff technical service division, using the shapefile sent by the applicant's consultant FORMA, determined through GIS mapping that the size of remainder parcel is 16.66 acres.

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends that the Commission **DENY** the proposed project, finding that, as currently designed, the Brightwater development project is inconsistent with Sections 30210, 30212, 30213, 30214, 30222, 30231, 30240, 30244, and 30251 of the Coastal Act. These policies seek to maximize public access and provide or enhance appropriate public recreation, especially lower cost visitor and recreational facilities; protect and enhance marine water quality; protect environmentally sensitive habitat areas (ESHA) and other important land resources and allow only resource dependent uses in ESHA and ensure adequate buffers between ESHA and development areas; to protect archaeological and cultural resources; and the protection of scenic coastal resources to and along the coast by minimizing the alteration of natural landforms.

The 105.3 acre Brightwater development site is located on the upper bench of the Bolsa Chica Mesa in Orange County, adjacent to the City of Huntington Beach. The Bolsa Chica Mesa is adjacent to the Bolsa Chica Lowlands which include the approximately 1,300 acre State owned Bolsa Chica wetlands and Bolsa Chica Ecological Reserve. The Bolsa Chica Mesa has an upper bench and a lower bench separated by a gradual, roughly 25-foot high slope. Together, along with the Huntington Mesa to the south of the Lowlands and the Lowlands themselves, the Bolsa Chica Mesa is a part of a fragile upland/lowland ecosystem. The project site contains an existing environmentally sensitive habitat area (ESHA) that is recognized by the Coastal Commission, Department of Fish and Game and the courts. The ESHA is a 5-acre Eucalyptus tree grove located along the bluff edge and down the slope of the upper bench, overlooking the Lowlands. There are also other important land and marine resources on the project site. A 0.06 acre seasonal wetland near Los Patos Avenue on the project's northern boundary and a 0.2 acre pocket wetland at the southern edge of the slope overlooking the lower bench of the Bolsa Chica Mesa (Exhibit 4). While these two wetlands are not considered by the Commission staff ecologist/wetland coordinator, Dr. John Dixon, to constitute ESHA under the Coastal Act definition, they are nonetheless important marine resources that are protected under Section 30233 of the Coastal Act.

In addition to these previously identified land and marine resources, the site also contains other important land resources including additional areas that staff has concluded qualify as ESHA under the Coastal Act. Some of the Southern Tarplant populations and the burrowing owl habitat are considered ESHA. Of the 105.3-acre site, approximately 72 acres contain non-native annual grasslands/ruderal vegetation. This vegetation is considered an important land resource because it is critical to the ecosystem as foraging habitat for numerous raptors and ground mammals, some of which are special status species. The upper bench of the Bolsa Chica Mesa is also a natural landform. Though it has been altered in the past, staff believes that it still should be considered a scenic coastal resource, considering its scenic qualities when viewed from below the site from

Bolsa Chica State Beach or Pacific Coast Highway. From the project site are also spectacular views of the Lowlands and the birds that use them and the beach and ocean beyond.

Given the numerous resources of the site, all development must be carefully sited and designed to avoid the ESHAs and significant adverse impacts to the other resources. Development of the site must also appropriately maximize public access and passive recreational opportunities, especially given its location adjacent to the State's recently acquired wetlands where millions of dollars are currently being spent in wetland restoration efforts.

The proposed Brightwater development project conceptually includes several aspects that are consistent with Chapter 3 Coastal Act policies. For instance, the proposed project provides a public, lower cost, recreational use, a use that is preferred by the Coastal Act, namely the proposed 28-acre upland habitat park with walking and bicycle trails, public parking and interpretive information. It is also in a location on the project site which provides the public scenic views of the State owned wetlands, Bolsa Chica State Beach and the Pacific Ocean. However, the proposed trail and public parking are improperly located within the critical terrestrial buffers causing significant adverse impacts to the environmentally sensitive land resources that are to be protected by habitat buffers.

As summarized below and discussed in detail in this staff report, the Brightwater development project, as currently designed does not protect or enhance the coastal resources of the site and adjacent marine areas or appropriately maximize public access and passive recreational opportunities.

Areas of Major Controversy

- **Inadequate Buffer Between Eucalyptus Grove ESHA and Adjacent Development.** The proposed Brightwater development project provides a 100-foot buffer between the edge of the existing Eucalyptus grove ESHA and the proposed residential lots**.** The Eucalyptus trees are used by raptors as nesting and roosting sites, including the white-tailed kite, American kestrel, and the great horned owl. Adequate buffers between habitat areas and development are essential in maintaining the viability of habitat areas. Due to the interdependence of the mesa with the wetlands of the Bolsa Chica Lowlands, staff recommends a 100-meter buffer (328 feet) between the Eucalyptus tree ESHA and the adjacent development in order to adequately protect the ESHA. If grading occurs when raptors are nesting, an even larger buffer of 152 meters (500 ft.) should be around the nest during construction activities. Given the uncertainty of future development on the lower bench of the Bolsa Chica Mesa, the ESHA buffer on the upper bench is even more important.

- **Encroachments into the Eucalyptus Grove ESHA and the ESHA buffer.** As stated above, the Eucalyptus grove ESHA buffer at 100 ft in width is inadequate to protect the ESHA from adjacent development and should be 100 meters in width. Additionally, the proposed project includes significant encroachments into the proposed 100 ft. wide ESHA buffer, and, into the ESHA itself. The project proposes fuel modification to protect the proposed residences throughout most of the proposed Upland Habitat Park, which is to be dedicated to the public upon completion of construction. Further, Fuel Modification Zone D includes the entire ESHA buffer and encroaches into the Eucalyptus grove ESHA, in order to protect future residences on 16 of the proposed lots (Exhibit 14). There would be initial and continued modification of the understory affecting approximately 0.8 acre of the existing five acre Eucalyptus Grove ESHA. Additional encroachments into the proposed 100 ft. wide Eucalyptus grove ESHA buffer include: (1) approximately 600 linear feet of the proposed paved, all-weather, pedestrian/bicycle trail (as close as 12 feet from the ESHA in one location); (2) significant grading activity (including a 30 ft. high, fill slope, two acres in size); (3) five of the 30 proposed public parking spaces; and (4) approximately 250 ft. of the extension of Bolsa Chica Street.

- **Elimination of Burrowing Owl ESHA.** The burrowing owl (Athene cunicularia) is a California Species of Special Concern (CSC), as designated by the California Department of Fish and Game. This bird hunts for prey over open areas and grasslands and typically nests in the abandoned burrows of rodents. Evidence of burrowing owl use of the site was documented in 2001-2002 and 2002-2003. Further, a raptor biologist with extensive knowledge of the Bolsa Chica Mesa has opined that wintering burrowing owls use the Bolsa Chica Mesa during most years. It is the opinion of the applicant that the bird does not reside on the project site, but only winters there**.** It is the opinion of the Commission's staff ecologist that the identified burrowing owl habitat on the upper bench constitutes an environmentally sensitive habitat area (ESHA) under the Coastal Act and therefore must be avoided. The proposed project would result in the loss of the burrowing owl habitat, as it is the location of the proposed 1.3-acre water quality detention basin for the residential development. On June 15, 2004, the applicant submitted a ground squirrel survey of the entire mesa with the hopes of demonstrating that suitable burrowing owl habitat exists on the lower bench of the Bolsa Chica Mesa, allowing the identified burrowing owl habitat on the upper bench to be eliminated due to the proposed development. Commission staff ecologist/wetland coordinator, Dr. John Dixon disagrees with this conclusion of the applicant, as detailed in Section D., Biological Resources, and recommends that the Commission require that the identified remain in tact.

- **Elimination of Southern Tarplant ESHA.** Southern Tarplant is listed as a 1B plant (Rare, Threatened, or Endangered in California and Elsewhere) by the California Native Plant Society. There are several small, scattered populations of Southern Tarplant within the project site on the upper bench. Based on information provided by the applicant, including multi-year surveys, the Commission's staff ecologist has

determined that the fairly large population of Southern Tarplant that surrounds the Los Patos seasonal wetland is an environmentally sensitive habitat area (ESHA) as defined by the Coastal Act. As such, the Tarplant ESHA must be preserved in place and protected with an adequate buffer. The applicant proposes to translocate this Tarplant ESHA (as well as all Southern Tarplant on the development site) from the upper bench to the lower bench to make way for a 2.5-acre private recreation center for the new residential community.

- **Elimination of 75 Acres of Grassland Open Space Habitat.** The 105.3-acre project site is primarily vegetated with annual grasslands and ruderal vegetation along with several environmentally sensitive habitat areas. Although annual grassland/ruderal vegetation type is non-native, it nevertheless provides foraging habitat for several California Species of Special Concern (CSC) including, but not limited to, the San Diego coast horned lizard, white-tailed kite, northern harrier and the burrowing owl. The loss of this vegetation is considered significant because it represents one of the last significant grasslands adjacent to a coastal wetland, making it an integral part of the wetland/upland ecosystem. Thus the loss of the upper bench grassland has indirect impacts on several special status species inhabiting the Bolsa Chica Lowlands, including the California least tern, western snowy plover, and the peregrine falcon, and degrades the value of the adjacent ESHA. The project as proposed and approved the County of Orange provides no mitigation for this significant adverse impact. The Department of Fish and Game, in its comments on the project EIR recommended that the loss of annual grassland/ruderal vegetation be mitigated at 0.5:1.

- **Inadequate Public Access Through Guard-gated Community.** The 105 acre upper bench of the Bolsa Chica Mesa, at about 50 ft. above sea level, affords spectacular views of the Pacific Ocean, Bolsa Chica State Beach and the now State owned Bolsa Chica wetlands below the site. Although the project includes the addition of 23 acres of park land along the slope and bluff to the existing 5-acre bluff edge Eucalyptus grove ESHA to create a 28-acre public upland habitat park, the proposed guard-gated residential community would prohibit all public access through the community to get to the park. The public's only access to the passive park will be from Warner Avenue along the park's pedestrian/bicycle trail or from the only public vehicular entry at the proposed extension of Bolsa Chica Street on the eastern boundary of the project site. Although the applicant modified the project description on April 16, 2004 to provide 114 (unstriped) off-site parking spaces along Los Patos Avenue, this parking will not enhance access to the park since the public would still be prohibited from walking (or bicycling) through the residential community to get to the park, which is on the opposite edge of the project site, once they parked their cars in these off-site parking spaces. Additionally, the County's approval of the project in May 2002 already included the requirement to either improve or provide financial security for the improvement of the south side of Los Patos Avenue from Marina View Place to Green Street (County Condition number

34). The park will also be gated on Bolsa Chica Street, the only vehicular entry. Although thirty public parking spaces and bicycle racks are provided at the Bolsa Chica Street trailhead, public use of the park is not encouraged due to inadequate signage and public access restrictions.

- **Significant Landform Alteration.** The Bolsa Chica Mesa, although a natural landform rising some 50 feet above the Lowlands, has been altered in the past. The slope between the upper and lower benches is very gradual due primarily to grading and construction of two gun emplacements (concrete bunkers) on the slope during World War II. The bluff edge along the upper bench was also used as a borrow site for residential development in Huntington Beach in the early 1970's. Despite these alterations, the Bolsa Chica Mesa still remains a scenic, natural landform whose further alteration should be minimized. However, the applicant proposes further significant alteration of the bluff edge, adjacent to the protected Eucalyptus grove ESHA with a 30-foot high fill slope, 2 acres in size. Although the applicant argues that the proposed fill is to restore the slope to its 1939 condition prior to the above alterations, the merits of such a "restoration" are debatable, and in the opinion of Commission staff's geologist, Dr. Mark Johnsson, clearly represents further significant alteration of a natural landform. The purpose of the fill appears to be to allow the proposed residential development to be extended out to the current bluff edge by placing the Bolsa Chica Street extension and the public parking on the new fill slope. Although the extension of Bolsa Chica Street, a public road, and the provision of public parking are encourage, it should be done in a manner that does not cause further significant alteration of bluff or in a location within the terrestrial buffer, as it is currently proposed.

Additional project features that are inconsistent with the Coastal Act are inadequate water quality management program causing potential impacts to adjacent marine resources and potential significant impacts to cultural resources due to extensive grading activities (330,000 cubic yards of cut as deep as 20 feet) without the presence of Native American monitors.

The applicant contends that the current project was designed to be consistent with the Commission's November, 2000 action on the proposed Bolsa Chica Local Coastal Program (LCP). The standard of review for the proposed project is the Coastal Act and not the Commission's action on the LCP since the LCP was never certified. However, as discussed in Section C of this staff report, "Comparison of the Proposed Project With the 2000 Bolsa Chica LCP", the proposed project is not consistent with the Commission's 2000 action on the LCP in a number of significant provisions.

LOCAL APPROVALS RECEIVED: See Appendix A

SUBSTANTIVE FILE DOCUMENTS: See Appendix A

I. STAFF RECOMMENDATION OF DENIAL

Staff recommends that the Commission DENY a coastal development permit for the proposed development by voting NO on the following motion and adopting the following resolution**.**

MOTION: *I move that the Commission approve Coastal Development Permit No. 5-04-192 for the development proposed by the applicant.*

STAFF RECOMMENDATION OF DENIAL:

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO DENY THE PERMIT:

The Commission hereby denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. DESCRIPTION OF PROPOSED PROJECT AND PROJECT SITE

Bolsa Chica Mesa is made up of a lower bench and an upper bench (also referred to as the lower mesa and upper mesa) separated by a gentle slope. The upper bench is located adjacent to and south of Los Patos Avenue and Bolsa Chica Street in the unincorporated area of Bolsa Chica, County of Orange. Although the majority of the upper bench (105.3 acres) is located within the unincorporated Bolsa Chica area of Orange County, approximately .95 acres in the northeasterly corner of the Brightwater development is located within the corporate boundaries of the City of Huntington Beach (Exhibit 1).

Huntington Beach has a certified Local Coastal Program. Therefore, the City of Huntington Beach would be the agency to which the applicant must file a coastal development permit application for these nine homes in the City of Huntington Beach. The site is surrounded on the north (across Los Patos Avenue) and northeast by (the Sandover development in the City of Huntington Beach) residential development, the Goodell property and Bolsa Chica Street; on the southeast by the Shea Homes property (the pending Parkside Development located in the City of Huntington Bench) and the existing concrete lined East Garden Grove-Wintersburg (EGGW) Flood Control Channel; on the south by the now State-owned Bolsa Chica lowlands; and on the west by the approximately 120 acre lower bench of Bolsa Chica Mesa and beyond the lower bench, the 306 acre Bolsa Chica Ecological Reserve owned and managed by the California Department of Fish and Game, Pacific Coast Highway and Bolsa Chica State Beach and the Pacific Ocean (Exhibit 2).

The proposed Brightwater development is located primarily on the 105.3-acre upper bench. The applicant owns approximately 103 acres on the lower bench of the Bolsa Chica Mesa, with the Ocean View School District owning 15 acres and the Department of Fish and Game owning the remainder of the lower bench as part of the upland portion of the Bolsa Chica Ecological Reserve. Although the applicant has indicated that the 120-acre lower bench is not a part of the development proposal, development is proposed for the lower bench. Upper bench development consists of subdivision into 379 single-family residential lots in a guard-gated community. Both private and public recreation open space and habitat conservation areas are also proposed.

Overview of Brightwater Development Project

Residential Community

The Brightwater residential community is a 379-unit, private gated development on approximately 77 acres of the 105.3-acre development site. It will have two guard-gated entries with guardhouses located off the main project entry at Warner Avenue and a second entry on Bolsa Chica Street. The community is planned at medium-low density (6.5-12.5 DU/Ac). The community design concept is that of a New England coastal village with six styles of single-family housing types and sizes. The four larger single-family home types have lots ranging from 4,000 to 7,000 square feet and homes ranging from 2,200 to 4,200 square feet. There will also be smaller units constructed as planned unit developments using reciprocal easements (zero lot lines) and other integrated site planning techniques but are detached single family residential units. The four smaller styled developments have lots that are approximately 3,000 sq. ft. and the homes range from roughly 1,500 to 1,900 sq. ft. All units range from 3 to 5 bedroom floor plans with one product type having as few as two bedrooms. None of the units will exceed 35 feet in height and most will be at 28 - 32 ft. high.

At the northeast corner of the Brightwater project site is the boundary between the City of Huntington Beach and the unincorporated Orange County area. The boundary cuts diagonally between the Brightwater site and the recently completed Sandover development in Huntington Beach (Exhibit 3). One of the project goals is to integrate the two communities. To accomplish this goal, three of the lots approved under the VTTM 15460 will be annexed to the City and combined with three of those lots. As a result of the annexation and vacation of the existing entry into the Sandover development the potential for nine additional lots will exists. Annexation and construction of any development in the City of Huntington Beach is not authorized under the subject coastal development permit. The City will handle development within the City of Huntington Beach as the certified Huntington Beach LCP covers the area.

Private Recreational Facilities

The 2.5 acre private recreation center, located near Los Patos Avenue in the center of project site, contains a 1,350 sq. ft. clubhouse, three swimming pools, two family/small group picnic areas, a tot lot and elevated boardwalk that provide a continuous, grade-separated viewing of the existing Los Patos Wetland and wetland buffer that will be enhanced. Three vertical walkways or “paseos” leading from the residential community to the park provide the community residents and their guest access to the public upland habitat park. A total of 50 parking spaces will be provided for the private recreation center. The private recreation facilities are located in Planning Area 7-1 (Exhibit 3).

Public Recreational Amenities

At the far western and southern edges of the Brightwater development project is Planning Areas 3A and 3B which is the 28-acre upland habitat park, located along the western slope edge and the southeastern bluff edge of the upper bench of the Bolsa Chica Mesa (Exhibit 3). The upland habitat park includes the existing 5-acre Eucalyptus grove ESHA along the southeastern bluff edge. The existing “pocket wetland” is also within the habitat park and it will be preserved in place and provided with a 100 ft. wetland buffer. Protective fencing will be placed around the Eucalyptus ESHA and the existing wetland. Split rail fencing will be on the bluffward side of the trail. The habitat park will be planted with coastal prairie, and coastal sage scrub and coastal bluff scrub habitats. Within the park will be a paved, 12 ft. wide multi-use pedestrian/Class I bicycle trail, and an interpretive/spur trail, bicycle racks for up to 20 bicycles, interpretive signage, an orientation kiosk and rustic seating along the trail. Bolsa Chica Street will be extended into to habitat park as the only vehicular entry where 30 on-site public parking spaces will also be provided (Exhibit 4). Protective fencing will also be located along both sides of Bolsa Chica Street. Once constructed, the upland habitat park will be dedicated to the County of Orange for public park and conservation purposes.

The series of five constructed wetlands and detention basin that serve as part of the water quality management plan treatment system for the residential community is also located within the upland habitat park.

Other community facilities include a 2 million gallon underground (35 ft. deep) water storage reservoir will be provided for the community as well as domestic water pump station including two fire pumps. A temporary on-site groundwater well will be constructed and used during grading and construction operations. The temporary well will be abandoned once the permanent underground reservoir is completed. 630,000 cubic yards of balanced grading will be necessary to carry out the development as planned (30,000 cy of cut will be shrinkage from overexcavation). As detailed in Section G.2. of this staff report, the Orange County Fire Authority requires initial and on-going fuel modification for the homes that are adjacent to the upland habitat park.

Residual Parcel

When the Commission approved, during consideration of Bolsa Chica LCP in November, 2000, 100 ft. and 50 ft. buffers, though not normally of adequate width to protect the environmentally sensitive habitat areas and adjacent important land resources such as exist on the Bolsa Chica Mesa, the buffers were reduced as a trade-off for the concentration of development that was occurring on the upper bench in exchange for the placement of an open space easement over the entirety of the lower bench of the Bolsa Chica Mesa. The deliberations were only possible because the Commission had the entire Bolsa Chica Mesa before it given that they were acting on an LCP amendment that included all of the area within the Bolsa Chica LCP Area. The current coastal permit application is primarily to subdivide and develop the upper bench of the Bolsa Chica Mesa with a gated residential community. The upper bench, approximately 105.3 acres in size, is primarily one legal parcel comprised of a portion of Parcel 2 of Certificate of Compliance No.CC 92-01, but also includes an 8.2-acre parcel of land formerly owned by Metropolitan Water District. However, Parcel 2 extends down the slope and includes approximately 16 acres of land on the lower bench (Exhibit 5). Under the approved VTTM 15460 the applicant is requesting to separate this 16-acre lower bench portion from larger upper bench portion of the existing parcel and create a "residual" parcel on the lower bench. Staff incompleted the initial coastal development permit application for the proposed development in November, 2002 for several items, including the applicant's plans concerning the lower bench[4]. Staff noted in the letter to the applicant that all previous

[4] The initial coastal development permit application that was submitted on November 6, 2002 was application 5-02-375. The applicant provided Commission staff with the requested additional information in several separate submittals over an extended period of time. The application was finally filed on September 24, 2003. Staff tentatively scheduled the application for the Commission's February, 2004 meeting in San Diego. The applicant requested the postponement of the matter in order to allow them time to enter into discussions with the California Wildlife Conversation Board for the sale of the lower bench for conservation purposes. Commission staff agreed to the request provided the applicant waive their right to a final Commission action within 180 days of the completed application since this would not be possible with a postponement of the hearing date. The applicant waived his right to a hearing within 180 days, and the

evaluations of the biological resources, potential impacts and planning efforts for the Bolsa Chica Mesa included both the upper and lower benches. The applicant's response was that there were no plans, at the present time, for the lower bench. However, staff noted that the existing Parcel 2 to be subdivided in the current application also extends down the western slope and includes land on the lower bench. Staff further noted that the creation of this 16-acre residual lot is a division of land that constitutes development under the Coastal Act on the lower bench. Thus, the instant applicant did include some development of the lower bench, and the creation of a new parcel thereon required some explanation of the plans for that parcel. Further, the applicant is proposing to translocate Southern Tarplant existing on the upper bench, within the proposed residential development footprint, to the lower bench. All development in the coastal zone, unless it is otherwise exempt, must be approved by the Coastal Commission, since the local government has no certified LCP for this area. Despite the applicant's contention that none of the lower bench is before the Commission in the subject application, the Commission disagreed with this statement based on the creation of a separate legal parcel on the lower bench through the proposed subdivision of Parcel 2, and the translocation of Southern Tarplant from the upper bench to the lower bench.

Therefore, the proposed lower bench development is being analyzed under this application as was approved by the local government in the approval of Vesting Tentative Tract Map (VTTM) No. 15460 and included in the application submittal to the Commission. Also the portion of the lower bench to receive topsoil and tarplant seedlings from the upper bench and be graded to the same compaction as the upper bench tarplant areas is also included in this application by virtue of the fact that the applicant is proposing this development. The Translocation Plan Southern Tarplant (Centromadia Parryi ssp. Australis) Brightwater Development Project, Bolsa Chica Mesa, Orange County, California, LSA, May 1, 2003, was included in the application submittal package for the previous and current coastal development permit application.

Site Description

The approximately 225-acre Bolsa Chica Mesa is only one portion of the Bolsa Chica LCP area. On the opposite end (to the south) of the LCP area is the Huntington Mesa, including the proposed Harriett Wieder Regional Park. The County of Orange began its LCP planning activities in 1977, segmented the area of the coastal zone into four segments with 12 geographic subareas or segments, the Bolsa Chica area being of those segments. The LCP area is comprised of approximately 1,588 acres of unincorporated land within the

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application was then tentatively scheduled for the Commission's June hearing in Los Angeles. Citing on-going negotiations over the sale of the lower bench, the applicant requested an additional postponement. Under the Permit Streamlining Act, the Commission must take a final action on an application within a maximum of 270 days or the application must be withdrawn. On May 13, 2004, the applicant formally withdrew application 5-02-375. On May 21, 2004, a new application, 5-04-192, the subject application, was submitted. Coastal development permit application 5-04-192,as submitted, was identical to application 5-02-375.

coastal zone of northwestern Orange County. Currently, the land exists predominantly as open space containing both upland and wetland habitat. The Bolsa Chica and Huntington mesas rise some 50 feet above the lowlands and are open space areas consisting primarily of non-native grasslands. However, they are a very important component of the Bolsa Chica ecosystem. An extensive wetland area located between two upland mesas to the north (Bolsa Chica Mesa) and south (Huntington Mesa) dominates the site. The Pacific Coast Highway, Bolsa Chica State Beach, and the Pacific Ocean border the western side, while urban development occurs to the east. The Bolsa Chica wetlands were formerly part of an extensive coastal lagoon/salt marsh system, which was estimated to cover 2,300 acres in 1894 by the U.S. Fish and Wildlife Service. Today, substantial portions of the wetland habitat remain in the lowland area.

Bolsa Chica is a unique place along the California coast. Bolsa Chica has undergone substantial degradation caused by human interference with its natural wetlands processes commencing in the 1800's. Bolsa Chica has been used for a variety of purposes over the years, most notably for on-going oil and gas production since the 1930's. Beginning in the 1960's and continuing through the late 1980's, it became increasingly recognized that the wetlands at Bolsa Chica were in need of major restoration. Initially restoration was proposed to be achieved through construction of a new ocean inlet in conjunction with a marina (boating facility).

Over the past century, Bolsa Chica has been affected by urban, recreation, and oil-related development. Three state oil leases occur within the lowlands, which currently support 331 oil wells (active and inactive), related oil facilities, and improved and unimproved roadways. Although development has markedly changed Bolsa Chica, the area currently contains substantial and important natural resource values. The Bolsa Chica Lowlands contains one of the largest remaining coastal wetlands in southern California.

Although a good portion of the wetlands is now degraded due to oil production, road construction and flood control, tens of thousands of birds use Bolsa Chica lowlands every year, including six endangered or threatened species. Up until 1997, the majority of the lowlands were in private ownership. However, in 1997, the State of California acquired 880 acres of the lowlands for the purpose of carrying out a comprehensive wetlands restoration, including a new ocean inlet. The Ports of Los Angeles and Long Beach are providing funding for the wetland restoration.

Bolsa Chica Mesa has been subject to agricultural activities for a substantial period of time. At the southern edge of the lower and upper bench of the Bolsa Chica Mesa is a continuous grove of Eucalyptus trees. Although Eucalyptus trees are not native to the area, they serve a vital biological role in the wetland/upland ecosystem. The Eucalyptus grove totals approximately 20 acres on both benches, 5 acres being on the upper bench. It is recognized by the Department of Fish and Game as an environmentally sensitive area under CEQA and the Coastal Commission and the courts as an environmentally sensitive habitat area or ESHA, as defined by the Coastal Act. Further inland from the Bolsa Chica

Mesa bluff edge are grasslands that are used by both birds and other land mammals, including, but not limited to, the burrowing owl, for foraging.

B. PLANNING HISTORY

The planning effort for the Bolsa Chica segment of the County of Orange Local Coastal Program is long and controversial. Although the subject application is the first substantial coastal development permit application to the Coastal Commission for permanent development on the Bolsa Chica Mesa, the Commission's first consideration of the Bolsa Chica Local Coastal Program (LCP) began in 1982. Despite the Commission's numerous actions on the Bolsa Chica LCP throughout this twenty-year period, no LCP has ever been fully certified.

The Bolsa Chica LCP planning area is approximately 1,588 acres in size. The planning area is flanked on the north by Warner and Los Patos Avenues and the Bolsa Chica Mesa and on the south by the Huntington Mesa and Seapoint Street[5]. Between the two mesas is the 1,300-acre Bolsa Chica Lowland. The Pacific Ocean (Bolsa Chica State Beach) borders the western side of the planning area with residential development in the City of Huntington Beach on the east. The lowlands are primarily historic and currently functioning wetlands interspersed with former wetlands that are utilized for oil production activities (pads and roads) and upland areas that are Environmentally Sensitive Habitat Areas. The 306-acre Bolsa Chica Ecological Reserve, including Inner and Outer Bolsa Bay, are managed by the California Department of Fish and Game. The East Garden Grove-Wintersburg (EGGW) Flood Control Channel, maintained by Orange County Flood Control District, is also within the Bolsa Chica lowlands. The flood control channel empties into Outer Bolsa Bay.

The Commission's first approval of the Bolsa Chica Land Use Plan (LUP) occurred in November 1984. On October 23, 1985, a revised land use plan was adopted which would have allowed for intensive development of the area including 75 acres of mixed-use marina/commercial, a 150 room motel, 500 acres of high density residential development, a navigable tidal inlet, an arterial roadway through the Bolsa Chica Wetlands (the Cross-Gap Connector), and 915 acres of wetland restoration. The amount of wetland fill that would have occurred under this LCP was not specified. This controversial LUP was never fully certified.

In June 1995, the County of Orange submitted an amended proposal of the Bolsa Chica Local Coastal Program (LCP) for Commission certification. As submitted in 1995, the Bolsa Chica LCP would have allowed 2,400 units on the upper and lower benches of the Bolsa Chica Mesa, and up to 900 residential units in the Lowlands for a total of 3,300

[5] Approximately 10 acres of the Huntington Mesa and Seapoint Street are within the City of Huntington Beach.

residential units. The Lowland development would have resulted in fill of 120 acres of wetland and the elimination of 65 acres of ESHA that was interspersed between the wetlands. The major property owner was required to fund the restoration of 770 acres of adjacent wetlands and dedicate the restored wetlands to a public agency, as mitigation for the wetland impacts. Public access and recreational facilities included a public loop road ("mesa connector road") on the Bolsa Chica Mesa, active and passive parks on both the Bolsa Chica Mesa and in the Lowlands, 100 public parking spaces on the Bolsa Chica Mesa and 60 public parking spaces in the Lowlands, pedestrian and bicycle trails on the mesas and in the Lowlands, a 4-acre kayak/conoe/beach facility on the inland side of PCH, and the optional provision of 10 acres of neighborhood commercial use on the Bolsa Chica Mesa. Fifty-eight acres of land on the Huntington Mesa was to also be dedicated to the County of Orange for the Harriet Wieder Regional Park. Development on the Bolsa Chica Mesa would have eliminated Warner Pond, a 1.7-acre wetland located on the lower bench. Additionally, the Eucalyptus grove ESHA on the Bolsa Chica Mesa was to be relocated onto the Huntington Mesa in order to accommodate the build-out of the Bolsa Chica Mesa. The Commission approved this amended version of the Bolsa Chica LCP on January 11, 1996. The Commission's decision became the subject of a lawsuit.

The trial court determined on June 4, 1997 that the Commission's approval of the Bolsa Chica LCP was deficient in two respects. First, that Section 30233 of the Coastal Act does not allow the fill of wetlands for residential purposes. Second, that the Warner Pond wetland was an environmentally sensitive habitat area (ESHA) and that the Commission failed to explain how such an ESHA could be filled consistent with Section 30240 of the Coastal Act. The trial court remanded the Bolsa Chica LCP to the Commission. The Commission reheard the Bolsa Chica LCP on October 9, 1997.

At the Commission's October 9, 1997 meeting, significant revisions were made to the Plan as originally submitted in June 1995. The Commission found in October 1997 that the fill of wetlands for residential development was not an allowable use and denied the development proposed in the lowland area. Residential development of the upper and lower benches of the Bolsa Chica Mesa was also scaled back to 1,235 residential units to avoid the widening of Warner Avenue which necessitated the fill of Warner Pond. Since lowland residential development was denied, the proposed wetland restoration mitigation project was also deleted from the Bolsa Chica LCP since it was to be funded by the developer through the lowland residential development. Furthermore, the wetland restoration program became moot since the majority of the lowland (880 acres) was acquired by the State of California, thus becoming public trust lands. The State and Federal governments have a Coastal Commission approved wetland restoration program covering 1,247 acres of the lowland. On November 13, 2001, the Commission approved Consistency Determination No. CD-061-01 (U.S. Fish and Wildlife Service) for the major wetland restoration project.

The Commission's October 9, 1997 decision on remand was again challenged. On April 16, 1999, the appellate court upheld the trial courts findings, added a new finding and

remanded the Bolsa Chica LCP back to the Commission. The new finding of the appellate court was that the relocation of the Eucalyptus grove from the Bolsa Chica Mesa to the Huntington Mesa was not allowed under Section 30240 of the Coastal Act. To comply with the appellate court's remand, the Commission once again re-heard the Bolsa Chica LCP on November 11, 2000. The Commission certified the LCP again, with suggested modifications that were significantly different from the previous suggested modifications.

In the Commission's 2000 approval, it again limited the number of residential units on the Bolsa Chica Mesa to a maximum of 1,235 to avoid the filling of Warner Pond. However, the Commission further required that all future development be concentrated on the upper bench of the Bolsa Chica Mesa adjacent to existing residential development and that the entire lower bench (with the exception of a 10 acre school site adjacent to Warner Avenue) be designated for conservation and preserved through an open space deed restriction. The Commission found that in order to be most protective of the resources that development of the Bolsa Chica Mesa must be confined to the upper bench of the mesa, in close proximity to existing development, to conserve all of the resources of the lower bench in a manner that is more protective overall of significant coastal resources, than protecting each specific habitat area in conjunction with development of the entire Bolsa Chica Mesa.

The Commission also required that the Eucalyptus grove ESHA remain intact and protected on the Bolsa Chica Mesa and that it not be relocated to the Huntington Mesa, as was previously proposed and approved under the earlier LCP. To protect the portion of the Eucalyptus ESHA located on the upper bench, the Commission required that all future residential development be set back a minimum of one hundred feet from either the inland edge of the ESHA or the inland edge of the bluff, which ever is the greatest distance. The Commission's 2000 action on the LCP further required that future development of the portion of the upper bench that overlooks the lower bench was required to be set back fifty feet from the upper edge of the slope separating the two benches. Other significant suggested modifications contained in the Commission's 2000 action included the prohibition of storm water discharges directly into Outer Bolsa Bay or other wetland area; the provision of a scenic public loop road allowing public parking on both sides, immediately landward of the buffer and paralleling the portion of the upper bench that overlooks the Lowlands; and the protection of cultural resources by requiring that a Native American monitor also be present during all grading operations.

The Commission's November 2000 action was unacceptable to the County of Orange and the landowner. In May 2001, the County notified the Commission that it would not be adopting the Commission's suggested modifications. Therefore, the Commission's certification of the LCP lapsed six months after its action. Therefore the standard of review for the currently proposed development remains the Chapter 3 policies of the Coastal Act since there is no certified LCP for the Bolsa Chica area of the County of Orange.

D. BIOLOGICAL RESOURCES

Although 82.6 acres of the105.3-acre Brightwater development project site (78%) is dominated by non-native annual grasslands and forb or ruderal communities, the upper bench of the Bolsa Chica Mesa also contains a Eucalyptus grove, Southern Tarplant, coastal bluff scrub communities, and two wetlands. These native and non-native communities combine to make the Bolsa Chica Mesa ecologically valuable. The mesa and its associated bluffs provide habitat for over 88 species of land birds, including some 33 resident species, 38 migrants, 15 wintering species and 3 summering species. Reptiles and at least ten species of mammals also utilize the Bolsa Chica Mesa.

The Bolsa Chica Mesa must also be viewed in the larger context of its role in the upland/ wetland ecosystem. According to both the California Department of Fish and Game and the U.S. Fish and Wildlife Service, the Bolsa Chica Mesa and the lowland wetlands are biologically interdependent. Together with the Bolsa Chica wetlands, a part of the roughly 1,300 acre Bolsa Chica Lowlands, the mesa communities which include both the Bolsa Chica Mesa and the Huntington Mesa to the south of the Lowlands, combine to make this area an important upland-wetland ecosystem. These biological interdependencies are vital to maintaining biological productivity and diversity. However, it must also be recognized that over the years, this resource area has declined due to human impacts and development pressures. Commission staff ecologist, Dr. John Dixon, summarizes the declining, but still valuable, overall ecological condition of the greater Bolsa Chica area in his July 15, 2004 memo on the Proposed Brightwater Development Project in this way:

> "The Bolsa Chica wetlands once covered over 30 square miles and, on the Bolsa Chica and Huntington Mesas, were bounded by coastal sage scrub communities that interacted ecologically with the wet lowlands. Although the wetlands have been reduced to less than two square miles and the adjoining mesas have been substantially developed and the remaining open space much altered, the U. S. Fish and Wildlife Service in 1979 nonetheless identified the Bolsa Chica ecosystem as "one of the last remaining viable wetland-bluff ecosystems in southern California." This viewpoint was echoed by conservation biologists over twenty years later: "...Bolsa Chica is one of the last remaining areas in coastal southern California with a reasonably intact upland-wetland gradient, which is of high ecological importance and generally lacking in representation in reserves in the region." In nearly all other coastal marsh ecosystems in southern California, the upland components have succumbed to urban development. Uplands provide pollinators for wetland plants, nesting and denning sites for avian and mammalian predators that forage in wetlands, important alternative prey populations for many of those predators, and critical habitat for primarily upland species. Many species have life-stages that rely on both wetland and upland habitats ... [citations omitted]

Dr. Dixon's memo can be found in its entirety as Exhibit 20 to this staff report and is incorporated herein by reference. Due to the special communities of the Bolsa Chica

Mesa, many areas of the mesa have previously been determined to constitute environmentally sensitive habitat areas, as defined by and protected by the Coastal Act, or, if not previously so recognized, nevertheless qualify as such. The Coastal Act defines environmentally sensitive habitat areas or environmentally sensitive areas as:

Section 30107.5

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

Further, Section 30240 of the Coastal Act requires that land resources that constitute environmentally sensitive areas or environmentally sensitive habitat areas as defined by Section 30107.5 be protected by allowing only resource dependent uses within those areas. Additionally, development adjacent to environmentally sensitive areas and parks and recreation areas must be sited and designed such that the adjacent development will not degrade the habitat or recreation values of the sensitive resource. Finally, uses adjacent to environmentally sensitive land resources and park and recreation areas must be compatible with the continuance of the resource area. Coastal Act Section 30240 states:

Section 30240

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In the November 2, 2000 Commission staff report concerning a proposed amendment to the Bolsa Chica Local Coastal Program, the following Environmentally Sensitive Habitat Areas (ESHA) were identified: (1) the Eucalyptus grove on and along the edge of both the upper and lower bench of the Bolsa Chica Mesa; (2) Warner Pond, located on the lower bench, a marine habitat connected by culvert to Huntington Harbor; (3) the natural habitats within the California Department of Fish and Game Ecological Reserve along the western edge of the lower bench of the Bolsa Chica Mesa; (4) the coastal sage scrub community throughout the mesa; (5) habitat of the southern tarplant throughout the mesa; and, (6) the degraded wetlands in the lowlands that are part of a restoration plan. The Eucalyptus

trees, Warner Pond, and the Ecological Reserve were generally depicted, the locations of the other ESHA types were not mapped.

Dr. Dixon notes that there has been no change in circumstances in the intervening four years that would cause the removal any of these habitats from the recommended list of environmentally sensitive habitat areas on or adjacent to the Bolsa Chica mesa. Thus, for the reasons stated in Dr. Dixon's' July 15, 2004 memo, the Commission finds these areas to constitute ESHA. In addition to the abovementioned habitats, the upper bench of the Bolsa Chica Mesa contains two small but functioning wetlands: the 0.2 acre Los Patos seasonal wetland (referred to as "seasonal pond" by the applicant), located near Los Patos Avenue and the 0.06 acre "pocket wetland" located in the central slope/bluff edge area (Exhibit 4). The Los Patos wetland is a seasonally ponded depression, dominated by herbaceous vegetation, including the rare Southern Tarplant. The "pocket wetland" is a small borrow pit dominated by a stand of willows and mulefat with very little understory vegetation. These wetlands are protected under Section 30233 of the Coastal Act and only certain enumerated uses are allowed if no less environmentally damaging feasible alternative exists, and if feasible mitigation measures are provided. However, these freshwater wetlands do not constitute ESHA as defined above. The proposed Brightwater development project however does not propose to fill these wetlands but will retain them in place with a 100-foot wetland buffer. This wetland buffer is consistent with numerous past Commission actions to protect wetlands from the effects of adjacent development. However, care must be taken during grading and construction to assure that impacts to the wetlands are avoided.

Another habitat of the Bolsa Chica Mesa that was not identified as ESHA in the Commission's previous actions on the Bolsa Chica LCP is that of the burrowing owl. The burrowing owl is considered a California Species of Special Concern by the Department of Fish and Game. Burrowing owls use the Bolsa Chica grassland and ruderal habitats as well as abandoned burrows of rodents or other small mammals. In the winters of 2001-2002 and 2002-2003, the applicant's biologist documented use of specific areas of the mesa by this owl (Exhibit 17a). The characteristics of the burrowing owl habitat, its ESHA status on the Bolsa Chica Mesa, and the proposed project impacts are detailed below.

The residential and park facilities of the proposed Brightwater development project, as currently proposed, will significantly impair the biological productivity of the upper bench of the Bolsa Chica Mesa, and indirectly impact the adjacent lowland wetlands. Adverse impacts from residential development and park facilities include: disturbances to wildlife, including nesting, from human activity and disruptive noise and lights due to the inadequate buffer adjacent to the Eucalyptus grove ESHA; loss of terrestrial habitat, including the protected Southern Tarplant and burrowing owl ESHAs and coastal sage scrub due to residential fuel modification encroachment into the ESHA and ESHA buffer, recreation center facility construction impacts on the Tarplant ESHA and the encroachment of residential fuel modification and the installation of the proposed detention basin into the burrowing owl ESHA; loss of foraging habitat caused by the development footprint and

associated elimination of 75 acres of non-native grasslands and ruderal vegetation that is utilized by several California Species of Special Concern (CSC); loss of wildlife movement corridors; adverse impacts to native plants and animals from domestic pets, especially cats, and the introduction of pollutants through residential landscaping and irrigation runoff, and human activities. The Brightwater development project features and their impacts to the various sensitive land resources of the upper bench of the Bolsa Chica Mesa are detailed below.

1. Eucalyptus Grove ESHA and ESHA Buffer

In 1982, the Department of Fish and Game (DFG) designated the Bolsa Chica Mesa Eucalyptus grove as an environmentally sensitive habitat area (ESHA) based on its value for nesting and roosting for a variety of raptors. In their 1982 report, "Environmentally Sensitive Habitat Areas at Bolsa Chica", DFG noted the presence of eleven raptor species. Raptors found to be using the grove included the white tailed kite, marsh hawk, sharp-shinned hawk, Cooper's hawk, and osprey. Many of these species are dependent on both the Bolsa Chica wetlands and the upland areas of the Bolsa Chica Mesa for their food. Other raptor biologists who have studied the Bolsa Chica Mesa have also found it to be particularly significant to a large number of birds of prey, including the Northern Harrier, prairie falcon, burrowing owl and the loggerhead shrike. The grove is also recognized by the Coastal Commission as an "environmentally sensitive area" or environmentally sensitive habitat area (ESHA) as defined by Section 30107.5 of the Coastal Act. The Commission first recognized the ESHA status of the grove many years ago, and the California appellate court in 1999 did not challenge the designation of the Eucalyptus grove as an ESHA protected by the Coastal Act when, in 1995, the County of Orange, on behalf of the predecessor applicant, Koll Real Estate Group, attempted to relocate the Eucalyptus grove, through the LCP process, to the Huntington Mesa, in order to make room for full development of the upper and lower benches of the Bolsa Chica Mesa.

The Eucalyptus grove along the southern bluff edge of the mesa is considered an ESHA because of the important ecosystem function it provides for birds of prey. However, the adjacent grassland, ruderal and coastal sage scrub function as foraging habitat and must also be preserved in order for the ESHA function. According to Dr. Dixon, some of the raptors that use the Eucalyptus trees forage in the wetlands, some forage in the mesa grasslands, and some forage within the coastal sage scrub along the bluff edge, and many of the raptors forage in more than one habitat. The need for hunting perches and roosting or nesting sites cannot be separated from the need for an effective hunting area. It is believed that the Eucalyptus grove would cease to function as ESHA were there not adequate foraging habitat nearby. The Commission found in November 2000 during its deliberations over the Bolsa Chica LCP, that the ESHA along with the adjacent non-ESHA areas are interdependent and constitute an ecological system. The Department of Fish and Game stated in its 1982 report that "habitat diversity is further enhanced by

associations of eucalyptus-grasslands, eucalyptus-coastal sage scrub eucalyptus (snags)-wetland communities**".** This important point was also made by the U. S. Fish and Wildlife Service in its 1979 report on the Bolsa Chica Area, reiterated in the 1996 EIR for the Bolsa Chica LCP, and by LSA Associates in 2001 in the subsequent EIR for the subject Brightwater development project.

The adjacent upland mesa area is important to the functioning of the ecosystem because: (1) many of the species that are dependent on the Eucalyptus trees or on burrows near the pocket wetland on the central slope area forage over the entire Mesa, (2) habitat areas need to be large enough to avoid habitat fragmentation and to provide connectivity to other habitat areas, and (3) habitat areas must be large enough to promote and maintain habitat and species diversity. Development must be separated from ESHAs by buffers in order to prevent impacts that would significantly degrade those areas. DFG and the USFWS previously recommended the establishment of a 100-meter buffer on the Bolsa Chica Mesa in the 1980's. Dr. Findlay, of the University of Ottawa, in a letter to the Coastal Commission dated February 9, 2000, recommended a 150-meter buffer for the Eucalyptus grove. The Coastal Commission staff ecologist recommends a minimum 100-meter (328 ft.) buffer around the Eucalyptus grove ESHA. In further studying the appropriate buffer for the Eucalyptus grove ESHA in light of the proposed adjacent development, Dr Dixon states:

> The buffer around the Eucalyptus tree ESHA is particularly important if those trees are to continue to function as nesting habitat for a variety of raptors. The California Department of Fish and Game and the U.S. Fish and Wildlife Service recommended a 100-m buffer. A literature review found that raptor biologists recommended buffers for various species of nesting raptors from 200 m to 1500 m in width, with the exception of 50-m buffers from visual disturbance for kestrels and prairie falcons. . . .In an independent review concerning a prior development proposal at Bolsa Chica with 100-foot (30-m) buffers, raptor expert Brian Walton opined that developers "...often rely on buffers that I find largely ineffective for reducing raptor fright/flight response." [and] "[t]hey describe unusual tolerance, habituated individuals or exceptions to normal raptor behavior rather than the more common behavior of wild birds."

Dr. Dixon concluded, after evaluating the various case studies and independent reviews specifically of the raptor behavior of the Bolsa Chica Mesa, that a minimum 100-meter buffer is necessary if the Eucalyptus trees are going to function as nesting sites in the future. He further opined that larger buffers are necessary during the extraordinary disturbance that takes place during construction. If raptors are nesting, a 152-m (500-ft) buffer should be established around the nest during construction activities**.** The sensitive habitat areas of the project site on the upper bench of the Bola Chica Mesa, including the recommended buffers, are shown in Figure 1 of Dr. Dixon's July 15, 2004 memo on the subject project (Exhibit 20).

As discussed above, the Brightwater development project proposal of a 100-ft. buffer around the Eucalyptus grove ESHA is inadequate to protect the ESHA from myriad human and domestic pet activities that occur when residential development is adjacent to a sensitive area. Dr. Dixon notes that buffers serve several important functions: they allow for some error in assigning boundaries (for example, extent of wetlands or southern tarplant habitat), they keep disturbance at a distance, they provide important auxiliary habitat (e.g., foraging or pollinator habitat), and they provide water quality functions around wetlands. Buffers should not be used for activities that have negative effects on the resources that are being protected.

The proposed Brightwater development project includes a 100-foot buffer between the proposed single-family residential lots and the Eucalyptus ESHA. Dr. Dixon does not thing that such a narrow buffer is adequately protective of the ESHA. In addition, there is also proposed several types of development within the buffer that would cause adverse impacts to the adjacent ESHA.

The development proposed between the residential lots and the Eucalyptus grove ESHA includes: (1) park amenities including a 12 foot wide, paved pedestrian/bicycle trail, 30 public parking spaces, bicycle racks, and the extension of Bolsa Chica Street (32 ft. wide park entry road – the only vehicular access to the park) (Exhibit 4), (2) significant grading activity including a fill slope up to 30 feet in height (Exhibit 15), (3) a water quality treatment facility for the residential community including five created wetlands and a 1.3 ac detention basin (Exhibit 4 and 15), and (4) 100% of the fuel modification requirements for the lots that abut the ESHA buffer ((Exhibit 14). Incompatible development within the ESHA buffer compromises the goal of the buffer. The impacts of the fuel modification activities are discussed in this staff report in Section G, Hazards, the impacts of the park amenities are discussed in Section E, Public Access and Recreation, the impacts of the grading is discussed in Section F, Scenic and Visual Resources, and the impacts of the water quality treatment facilities is discussed in Section H, Marine Resources, of this staff report. As is explained in those sections, each of these features has impacts that, in addition to being inconsistent with the primary policies discussed in those sections, is also inconsistent with Section 30240 of the Coastal Act.

The approved vesting tentative tract map for the Brightwater subdivision includes residential lots abutting the proposed 28-acre upland habitat park. The southeast portion of the upland habitat park includes the existing 5-acre Eucalyptus grove ESHA. The Brightwater development project's proposed 100 ft. wide ESHA buffer is also a part of the proposed upland habitat park (Exhibit 8). The park is located along the slope between the upper and lower benches of the mesa immediately below the proposed residential lots. Under the County's approval, the homes on each of the lots that abut the park are allowed to have 100% of the required fuel modification located in the upland habitat park that again includes the 100-foot wide ESHA buffer in the southeast portion of the park. The required fuel modification for approximately 16 of the residential lots in this area extends beyond the ESHA buffer and encroaches into the Eucalyptus tree ESHA itself. The Orange County

Fire Authority (OCFA) has conceptually approved the Fuel Modification Plan for the proposed project.

Fuel modification is an on-going activity that is required as long as there are adjacent habitable structures. The goal of the fuel modification is to control the plant palette and the location and design of development in order to minimize the risk of wild fires. This goal is at odds with the protection of native plant species because many of the native species are combustible. Further, methods of fuel load suppression are at odds with maintaining a natural plant community. Those methods include irrigation of native plants and thinning and vegetation removal of certain important native plant species that are a part of native plant communities. Therefore, if residences are allowed in the proposed location, there will be continual impacts in the ESHA with the on-going implementation of fuel modification requirements.

In addition to fuel modification activities within the ESHA and the Brightwater project's proposed 100 ft. ESHA buffer, other incompatible development within the buffer includes: (1) approximately 600 linear feet of the proposed 12 ft. wide paved pedestrian/bicycle trail (at one point the trail is as close as 10 -12 ft. from the ESHA); and (2) approximately 250 linear feet of the 32 foot wide Bolsa Chica Street extension and five of the proposed 30 public parking spaces; and (3) extensive grading (fill slopes as high as 30 ft.). These development encroachments into the ESHA buffer also compromise the effectiveness of the buffer in the protection of the adjacent ESHA. As explained by Dr. Dixon an ESHA buffer is supposed to contain transitional native vegetation, provide important auxiliary habitat and keep disturbance at a distance. Buffers are not intended to contain development such as that which is being proposed**.**

Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements for the protection of environmentally sensitive habitat areas, namely the Eucalyptus grove ESHA on the upper bench of the Bolsa Chica Mesa. The Commission therefore denies the proposed project as submitted.

2. Southern Tarplant ESHA

The Southern Tarplant is a Federal "Species of Concern" and listed as a 1B (Rare, Threatened, or Endangered in California and Elsewhere) plant by the California Native Plant Society (CNPS) and meets the CEQA definition of rare (threatened) and endangered species. Southern Tarplant is an annual plant that favors damp, disturbed areas and is generally restricted to grasslands, wetland edges, vernal pools, and alkaline flats in the coastal counties of southern California and has been greatly reduced and populations have been fragmented by development. According to Dr. Dixon, Southern Tarplant has become rare in California and its remaining habitat is particularly valuable due to the loss

of its natural habitat. The Department of Fish and Game further noted in their January 16, 2002 EIR comments on the proposed project, that one of the characteristics of the Southern Tarplant is that, as an annual (life cycle is completed within one year), the number of detectable (above-ground flowering) plants visible in any one year vary sharply depending on factors such as soil moisture. Because of this characteristic of the plant, quantifying populations and determining the impacts of a development project on existing tarplant communities can be problematic (Exhibit 9)**.** Therefore, the long-term health of the tarplant population depends on an extensive seed bank.

The applicant's consultant conducted tarplant surveys of both the upper and lower benches in 1999, 2000, 2001 and 2002. The largest concentration of tarplant by far is on the lower bench; however, the upper bench also contains several sizeable patches of the sensitive plant (Exhibit 16). Dr. Dixon notes that based on the applicant's recent surveys, the tarplant tends to be much more widely distributed among the habitats on the lower bench than on the upper bench where it is almost entirely confined to the area surrounding the seasonal pond adjacent to the Los Patos wetland. There may be habitat differences between the upper and lower benches that account for this phenomenon. Southern Tarplant is most abundant near trails and other open disturbed areas. Scattered individual plants on the upper bench do not constitute ESHA. However, the significant Tarplant populations around the Los Patos wetland on the upper bench should be considered ESHA under the Coastal Act definition. Similarly, the patches of tarplant near the western edge of the development area are part of the extensive population on the lower bench and area part of the ESHA. As environmentally sensitive habitat areas, the tarplant populations must be preserved in place and cannot be eliminated or translocated in order to use their existing locations for residential use.

The Brightwater development proposal would eliminate two of the existing ESHA populations of Tarplant within the proposed 28-acre Upland Habitat Park and a third tarplant population located in the area of the proposed 2.5-acre private recreation center surrounding the existing Los Patos seasonal wetland would also be eliminated (Figure 1 of Exhibit 20). The Brightwater development project, as approved by the County of Orange, and as submitted by the applicant in both the original application 5-02-375 and the subject application, does not propose the preservation any of the existing tarplant on the upper bench. All tarplant will be translocated to the lower bench through implementation of the **"**Translocation Plan, Southern Tarplant (Centromadia Parryi ssp. Australis) Brightwater Development Project, Bolsa Chica Mesa, Orange County, California, LSA, May 1, 2003. However, habitat that qualifies as ESHA under the Coastal Act must be protected in place, except under limited situations, pursuant to Section 30240 of the Coastal Act. Only resource dependent uses are allowed to impact ESHA and only if there is no other less environmentally damaging feasible alternative. Therefore, the proposed Southern Tarplant translocation is not permissible under the Coastal Act since it would be done for residential purposes. The courts have already established this standard in previous rulings concerning the Bolsa Chica site when the Commission approved the translocation of the

existing Eucalyptus grove ESHA over to the Huntington Mesa to make way for residential development.

The Southern Tarplant populations that constitute ESHA must also be protected from adjacent development with an adequately sized buffer. Commission staff ecologist recommends that a 50-foot buffer be established adjacent to the ESHA boundaries defined by the presence of tarplant, as illustrated in Figure 1 of his memo (Exhibit 20). The Commission has used such a buffer to protect sensitive vegetation in past actions, consistent with Section 30240(b) of the Coastal Act.

After conversations with staff concerning the tarplant surrounding the Los Patos wetland, the applicant verbally agreed to preserve any tarplant that is within the proposed 100-foot wetland buffer (since the tarplant basically rings the wetland). The applicant did not however modify the project description in writing to formalize this agreement. Further, the applicant is not willing to preserve all of the Tarplant ESHA surrounding the wetland, i.e. any of the tarplant that is more than 100 ft. from the wetland. When staff discussed Further, the applicant is unwilling to provide the necessary 50-foot buffer around the Tarplant ESHA in order to protect it from the adjacent planned recreational uses of the proposed 2.5-acre private recreation center. The 2.5-acre recreation center adjacent to the Southern Tarplant ESHA includes a tot lot; picnic areas on decomposed granite, a boardwalk and gazebo, several swimming pools and a 1,300 square foot clubhouse. There could certainly be a redesign of the private recreation center to allow the necessary preservation of the Tarplant ESHA. Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements for the protection of environmentally sensitive habitat areas, namely the Southern Tarplant ESHA populations on the upper bench of the Bolsa Chica Mesa. The Commission therefore denies the proposed project as submitted.

3. Burrowing Owl ESHA

One of the sensitive raptor species that uses the Bolsa Chica mesa is the burrowing owl. The Department of Fish and Game (DFG) considers the burrowing owl (Athene cunicularia) a California Species of Special Concern. It hunts for prey in open grasslands and areas of ruderal vegetation. The upper bench of the Bolsa Chica Mesa contains 75 acres of such habitat. In addition to foraging over the grasslands, the burrowing owl uses the abandoned burrows of the California ground squirrel and other small rodents as shelter during the nesting and wintering seasons. The burrowing owl is in decline in most areas of California, especially in the coastal zone due to the loss of habitat as a result of

development and rodent control activities. The rapid decline of this species in Orange County has been chronicled in the latter half of the 20th century.[6]

The Brightwater development site contains many burrows that have probably been used by the burrowing owl. One or two wintering birds are thought to use the Bolsa Chica Mesa, as evidenced by repeated observations of a one owl or two owls in the winters of 2001-2002 and 2002-2003 by the applicant's biologists (Exhibit 17a). However, it is believed that the Bolsa Chica Mesa is used by an unknown number of migrant burrowing owls as a stop-over foraging area, according to Dr. Dixon's communications with other raptor biologists. It is raptor biologist Peter Bloom's professional opinion that migrant and wintering burrowing owls use the Bolsa Chica Mesa during most years. The Bolsa Chica Mesa is one of the few areas in the region that still has the potential for nesting by this species in the future. Additionally, the burrowing owl is one of three species of raptors at Bolsa Chica that DFG biologist Ron Jurek thinks is most in need of habitat protection. Based on this information, Dr. Dixon has determined that the area on the Bolsa Chica Mesa as mapped by the applicant's biologist as burrowing owl habitat constitute an ESHA as defined by the Coastal Act, and therefore also should be protected as required by the Coastal Act. The Commission agrees. Additionally, the DFG, in its January 16, 2002 comments on the project EIR, recommended that the burrowing owl habitat on the upper bench be retained, if feasible.

Upon receipt of the applicant's mapping showing the burrowing owl habitat location, at the request of Commission technical staff, planning staff suggested that the applicant again review the submittal of the mapped burrowing owl use area. It appeared to staff that the area might have been drawn overly broad. The applicant however declined the offer to provide refined data. However, several months later, the applicant agreed to resurvey the project area for signs of burrowing owl use. On June 15, 2004, the applicant's consultant, LSA, submitted the results of a survey taken on June 2, 2004 (Exhibit 17). The applicant's June 2004 survey of ground squirrel activity found approximately 130 ground squirrel locations, providing a rough approximation of how squirrels are distributed on the site, as explained by the consultant. The highest use areas were areas where there is a break in topography; at the edge of the slope of the upper mesa on the west and at the bluff edge on the south and on the bluff edge of the lower bench overlooking Outer Bolsa Bay and the lowlands on the southeastern bluff edge of the lower bench. LSA concluded that, "the best way to offset potential impacts to burrowing owl habitat would be to enhance owl habitat suitability somewhere on the lower mesa where human disturbance could be managed".

However, Dr. Dixon recommends that the Commission use a similar approach in identifying the burrowing owl ESHA on the Bolsa Chica as it did in a recent project in the South Central Coast District, the Arco Dos Pueblos Golf Links (December 11, 2002 Commission Hearing). In that case, the Commission designated only trees known to have

[6] Hamilton and Willick (1996) and Gallagher and Bloom (1997), according to Draft Subsequent Environmental Impact Report, Volume I, Brightwater Development Project, Orange County, California, SCH #1993071064, LSA, November 17, 2001, page 4.9-21.

been used by white-tailed kites for nesting or perching and adjacent trees as ESHA. In the present instance, LSA Associates has identified the area containing burrows known to be used by wintering burrowing owls. Burrowing owls tend to reuse burrows year after year and an area should be considered occupied if at least one burrowing owl has been observed occupying a burrow there within the last three years, according to the California Burrowing Owl Consortium, recognized by the Department of Fish and Game. Therefore, the LSA field observations are good evidence of occupied habitat, and Dr. Dixon recommends that the Commission designate as ESHA the area mapped by LSA as the "Primary roosting areas used by wintering burrowing owls". This designation would be made in recognition of its important role in the ecosystem of providing support to a species of special concern that has nearly been extirpated from the coastal zone by conversion of habitat to urban uses. This LSA mapping is shown in Exhibit 17a and is reflected in Figure 1 of Dr. Dixon's July 15, 2004 memo (Exhibit 20).. The Commission agrees and hereby designates those areas as ESHA.

Again, once an area is designated as ESHA, the Commission cannot sacrifice it in exchange for another (except in limited circumstances not applicable here). Thus, the existing burrowing owl habitat, as provided by the applicant's biologist and shown on Figure 1 of Dr. Dixon's July 15, 2004, memo, must remain in tact, given the evidence of the previous use of the area by the burrowing owl. Although enhanced owl habitat suitability "somewhere on the lower mesa where human disturbance could be managed," as recommended by LSA may be beneficial, it cannot be used to justify removal of existing habitat.

Instead of retaining the burrowing owl habitat, the County of Orange in its approval of the project required the applicant (in Project Design Feature (PDF) 9-5) to conduct surveys for the burrowing owl prior to grading and construction, but ultimately will allow the existing burrow to be eliminated, with mitigation. If the burrow is found to be in active use, the bird(s) is (are) required to be passively relocated to enhanced or created alternative burrows, at a 1:1 ratio. DFG requested that the applicant conduct a formal burrowing owl survey and perform all activities concerning the burrowing owl using the 1993 "Burrowing Owl Survey Protocol and Mitigation Guidelines", prepared by the California Burrowing Owl Consortium following the DFG "Staff Report on Burrowing Owl Mitigation", dated September 25, 1995. Further, DFG requested that "when destruction of occupied burrows is unavoidable," enhanced or new burrows be provided on a 2:1 ratio on permanently protected lands adjacent to the occupied burrowing owl habitat, if possible.
As approved by the County, the applicant only has to provide mitigation at a ratio of 1:1 as opposed to the 2:1 suggested by DFG.

Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements for the protection of environmentally sensitive habitat areas, namely the burrowing owl ESHA on the upper bench of the Bolsa Chica Mesa. The Commission therefore denies the proposed project as submitted.

4. Annual Grassland and Ruderal Foraging Habitat

The vegetation type on the project site is predominantly non-native annual grasslands and ruderal vegetation. Of the 105.3-acre development area, 82.6 acres of open vegetated areas are dominated by annual grasslands (55.9 acres) and areas vegetated with ruderal grassland/forb (26.7 acres), according to the project EIR. Although annual grasslands and ruderal vegetation are generally not considered to be sensitive resources because of the exotic character of the dominant species, these habitats nevertheless provide important support for many native species of the plants and animals. It is particularly important as foraging habit for many species of birds of prey and it is being rapidly replaced by development in much of coastal southern California. At the Bolsa Chica mesa, the annual grassland and ruderal vegetation provides critical support for the any species of birds that use the Eucalyptus and palms trees along the bluff edge for perching, roosting and nesting. Without adequate foraging habitat nearby, the existing Eucalyptus grove of the Bolsa Chica Mesa would not continue to function as ESHA.

In the past, little concern has been expressed nor any actions taken about the loss of annual grasslands and ruderal vegetation given their status as non-native habitat. However, in recent years, with the increasing loss of native prairies, it has recently come to the attention of Department of Fish and Game and other raptor biologists that the remaining non-native annual grassland and ruderal vegetation are becoming a critical food source which is essential to the health of populations of many birds of prey and other native species. For this reason, DFG has recommended mitigation under the California Environmental Quality Act for the loss of such non-native habitat. In over 60 recent actions, DFG has required preservation of foraging habitat at a ratio of 0.5 acres preserved to each acre lost to development. At Bolsa Chica, the foraging habitat on the mesa is absolutely necessary for the continued presence of many of the raptors that utilize the Eucalyptus ESHA. Furthermore, concerning the interconnectedness of the foraging habitat and the Eucalyptus ESHA, DFG biologist Ron Jurek wrote, in an October 2000 independent review of the potential effects of development on raptors of the Bolsa Chica Mesa, that the Eucalyptus ESHA "...is a zone of trees with good perching and nesting conditions within raptor habitat. It is not the raptor habitat itself. In my professional opinion, for most of the raptor species known to use the ESHA, raptor use depends primarily on the availability of the food resources of the surrounding lands...." .

As proposed, the Brightwater development project would eliminate 75.2 acres of annual grassland and ruderal habitat, combined. In approving the development, the County of Orange also adopted the project's subsequent EIR. The EIR states that the proposed loss of foraging habitat will not be significant considering the existence of the remaining habitat on the mesa and in the region. The Commission notes that of the existing grassland and ruderal habitat on the upper bench of the Bolsa Chica Mesa, the Brightwater development

project eliminates all but 1.5 acres of grassland and all but 6 acres of ruderal vegetation. Therefore the EIR statement must be referring to the grassland and ruderal habitats remaining on the lower bench of Bolsa Chica Mesa. However, the Commission notes that the lower bench is not before the Commission given that the applicant has refused to include it in this or the original Brightwater application. There is no guarantee that the lower bench will be sold for conservation purposes.

The project EIR also suggested that the loss of foraging habitat would not be significant based on a statement of another October 2000 independent reviewer of the Bolsa Chica Mesa, Brian Walton, that concluded that the overall population status would not be changed for any species of raptor at Bolsa Chica. Although this statement is true, Dr. Dixon points out that this standard is not adequate in the context of resource conservation and states, "it would be a very low standard that ignores the local or regional significance of a species' presence. It simply means that the viability of the species in California is unlikely to be measurably decreased by local losses. Similar claims can be made of impacts even to many endangered species where the loss of a few individuals is unlikely to push the species to extinction. That fact is, however, not a compelling argument for additional impacts". In fact, Mr. Walton did not intend to suggest that the raptor habitat at Bolsa Chica was unimportant. This is obvious in the following excerpts from Mr. Walton's letters to the Department of Fish and Game and to the Coastal Commission:

> Pete [Bloom] and I have studied raptors in coastal California for the last 25+ years. No one else can say that. We still feel that the raptors and the Bolsa Chica habitat are important. That has been a consistent opinion for nearly 20 years from the only two people who have been continuously focused on these species in these locations.
>
> During that period ... the rest of Orange County has largely been paved over and upland grasslands near coastal wetlands are almost non-existent. Hence, it would be likely that the opinions we had in 1982 on the importance of this habitat are even more relevant in 2000. I have difficulty in understanding why any development is allowed to occur in this area.

and:

> The clearest case where development is impacting raptors and their prey species but where the Commission still is uncertain of the real impact on raptor populations, is in Orange County. There, most raptor species have been completely eliminated from the coastal zone as breeders and most of the region has vastly reduced wintering population range. Even still, the last bit of available open space (Bolsa Chica) is being considered for some development, with the idea that the remaining raptors will move elsewhere or not be impacted, or live in remnant open space within the developed area.
>
> It is not accurate, in fact, that individual raptors when impacted by development simply move elsewhere and everyone survives. If that were true, there would be areas of incredible density in non-developed areas, where the impacted raptors have moved

and are now living with pre-existing birds. This philosophy would be analogous to thinking that if you tore down one of two adjacent apartment buildings, that all the residents would simply move into the remaining building and live two families to an apartment. The density of raptors is dependent on a variety of things, so birds cannot actually just get denser in adjacent areas by moving off development sites.

Given the above facts concerning the importance of grasslands and ruderal habitats for the proper functioning of the adjacent Eucalyptus ESHA for the many raptors that use the Bolsa Chica Mesa, a decision has to be made as to whether the non-native habitat alone constitutes ESHA as defined by the Coastal Act. Dr. Dixon outlines the issues that have to be factored when making such a determination. Although the raptor foraging habitat at Bolsa Chica is clearly of high ecological value because of its context in maintaining the raptors, including the burrowing owl, the non-native habitat alone does not constitute ESHA. However, its loss as contemplated in the proposed Brightwater development project would clearly be inconsistent with Section 30240(b) of the Coastal Act that requires that significant impacts to ESHA not be allowed. As discussed herein, the importance of foraging habitat is clearly such that the loss of a large amount at Bolsa Chica would result in "impacts which would significantly degrade" the adjacent Eucalyptus tree ESHA such that it would no longer be especially valuable to birds of prey. Therefore, to be in compliance with Section 30240(b) of the Coastal Act, development must be sited such that this does not occur.

Because of the significant adverse effects of development on raptor foraging habitat, Dr. Dixon suggests that the Commission should follow the recommendation of the Department of Fish and Game and seek mitigation for the destruction of annual grassland and ruderal foraging habitat on the Bolsa Chica Mesa by preserving 0.5 acres of such habitat for each acre lost to development. Preservation should be on the project site adjacent to the Eucalyptus tree ESHA and could reasonably include the recommended buffer areas for the Eucalyptus trees and for the burrowing owl habitat described above.

Therefore, for reasons detailed above, the Brightwater development project as currently proposed is inconsistent with the Coastal Act requirements that development in areas adjacent to ESHA shall be sited to prevent impacts that would seriously degrade the ESHA. The proposed development would remove the annual grasslands and ruderal habitat on the upper bench of the Bolsa Chica Mesa that are necessary for the continued functioning of the Eucalyptus tree ESHA. The Commission therefore denies the proposed project as submitted.

E. PUBLIC ACCESS AND RECREATION

The provision of public access in new development proposals is one of the main tenants of the Coastal Act, especially in conjunction with new development located between the sea and the first public road, such as the subject project. The 225-acre Bolsa Chica Mesa is located between the first public road and the mean high tide of the sea. At nearly 50 ft. above mean sea level, spectacular views of the wetlands and the associated wildlife and uninterrupted views of the Pacific Ocean are available from the upper bench of the Bolsa Chica Mesa. The Bolsa Chica Wetlands at approximately 1,000 acres is the largest remaining wetland in Southern Orange County. Following the 1997 State acquisition of most of the remaining wetlands that were under private ownership, a comprehensive Bolsa Chica wetlands restoration effort is now underway. Given the prominence of the adjacent Bolsa Chica wetlands, appropriate public access and passive recreational opportunities must be conspicuously posted and provided. Further, the Coastal Act gives priority to land uses that provide opportunities for enhanced public access, public recreation and lower cost visitor recreational uses.

Section 30210 Access; recreational opportunities; posting

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

(Amended by Ch. 1075, Stats. 1978.)

Section 30211 Development not to interfere with access

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 New development projects

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) Adequate access exists nearby, or, (3) Agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

(b) For purposes of this section, "new development" does not include:

(1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.

(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10

percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.

(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.

(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.

(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.

As used in this subdivision "bulk" means total interior cubic volume as measured from the exterior surface of the structure.

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

(Amended by: Ch. 1075, Stats. 1978; Ch. 919, Stats. 1979; Ch. 744, Stats. 1983.)

Section 30212.5 Public facilities; distribution

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30213 Lower cost visitor and recreational facilities; encouragement and provision; overnight room rentals

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.

(Amended by: Ch. 1191, Stats. 1979; Ch. 1087, Stats. 1980; Ch. 1007, Stats. 1981; Ch. 285, Stats. 1991.)

The proposed project does not provide for maximum public access to and along the bluff edge where views of the coast are available, as required by the Coastal Act. Further, as currently designed, the park trail, entry road and public parking spaces, supported by a 30 ft. high, 2 acre fill slope, are all located too close to the Eucalyptus grove ESHA,

inconsistent with the land resources protection policies of the Coastal Act. The Brightwater development portion of the site is approximately 105 acres and the proposed residual parcel is another 16 acres for a total project site of 121 acres. The applicant is proposing a 28-acre upland habitat park along the slope and bluff of the upper bench of the mesa (Exhibit 4). Therefore, 23% of the project area is devoted to public access and recreation land use along bluff and 77% of the site is used for residential and unknown purposes. However, it must be noted that the proposed upland habitat park is being used for more than public park purposes. 100% of the required fuel modification to protect future homes that abut the park is located in the public park. Additionally, a vegetated treatment system, the major part of the water quality management plan to treat low flow and storm runoff from the private community development, is also located in the public park. While the public park provides public passive recreational uses, including wildlife viewing opportunities of the adjacent wetlands, and scenic views of Bolsa Chica State Beach and the Pacific Ocean beyond, it also contains the existing 5-acre Eucalyptus grove ESHA and the necessary buffer, which is a constraint to development. Bike racks and interpretive information will also be provided along the 0.6 mile long paved pedestrian/Class I bike trail. The entire park will be dedicated to the County of Orange Department of Harbors, Beaches and Parks for recreation and conservation purposes upon completion of construction. The park acreage also includes the extension of Bolsa Chica Street, the only vehicular access to the park, and 30 public parking spaces at the end of this new road.

To determine whether a development meets the Coastal Act goal of providing maximum public access and recreational opportunities at a level appropriate for a particular site, the ease at which the public can use the amenities and not just the acreage devoted to such use must also be considered. The Coastal Act also requires that public access opportunities be conspicuously posted to inform the public of the on-site amenities. The applicant is proposing a guard-gated, private residential community between the public road (Los Patos Avenue) and the proposed public upland habitat park along the slope and bluff of the upper mesa, at the opposite end of the 105-acre site. All forms of public access (vehicular, bicycle and pedestrian), through the community are prohibited. The general public is not allowed to enter the residential community, park on its streets, or use the three proposed resident only interior vertical accessways that lead to the various segments of the more than half mile long park and trail. Further, the only vehicular access to the park, Bolsa Chica Street, on the inland most (eastern) boundary of the project site. The vehicular park entry location is not known to individuals who do not reside in area of Huntington Beach.

Further, the off-site signage informing the public of the availability of the proposed park is located at Warner Avenue and Bolsa Chica Street. The signage program includes no signage on Warner Avenue at Pacific Coast Highway. The existing publicly owned Bolsa Chica Ecological Reserve parking lot is located at Warner and Pacific Coast Highway. Many visitors from outside of the local area use this parking lot to enjoy the wetlands. This would be a much better location for signage to inform the public of the proposed upland habitat park. The applicant should seek permission from the Department of Fish and

Game, owners of the Ecological Reserve, to place public signage concerning the upland habitat park in the Ecological Reserve parking lot.

Private, guard-gated communities are not publicly inviting and are therefore not encouraged between the sea and the first public road. A visitor-friendly signage program that informs the public of the on-site public access and recreational amenities, including parking, may help to overcome the psychological public access barriers created by private communities. However, the proposed public signage program is also inadequate, further exacerbating the inadequacies of the overall public access and recreation provisions of the development. Therefore, although the proposed project includes a 28-acre upland habitat park, to be dedicated to the public, public access to the park is made difficult and therefore public access is actually discouraged. These design elements render the proposed project inconsistent with the public access and public recreation provisions of the Coastal Act.

Commission staff and the applicant had a meeting at which the public access deficiencies of the proposed project were discussed. Following that meeting, the applicant offered to provide 114 additional off-street parking spaces along Los Patos Avenue on the northern project boundary. The applicant offered to improve the south side of Los Patos Avenue, including streetscaping, along the project frontage of the currently partially unimproved roadway. However, these off-site parking spaces do little to facilitate public access to the proposed bluff park and scenic trail since the public would still not be allowed to walk through the residential community after parking in these off-site spaces. If one were to park along Los Patos Avenue, the most direct route to the central bluff area of the park would be to walk through the residential community. Additionally, the County of Orange already required the applicant to make the proposed street improvement as a condition of approval of the project.

Section 30212.5 of the Coastal Act advocates the distribution of recreation support facilities, such as parking, throughout an area as opposed to a single location in order to prevent overuse of any one area. This is especially significant given the sensitive land resources of the project site. The location of the only on-site public parking to support public use of the park is too close to the Eucalyptus grove ESHA and would be located on a proposed 30 foot high fill slope, placing people and cars at about the same level of the tree tops (Exhibit 4 and 15). This parking location and design creates the potential for significant adverse impacts to the raptors that use the Eucalyptus trees for nesting and perching, as detailed in Section D (Biological Resources) of this staff report. Therefore, the proposed project is inconsistent with Sections 30212.5 and 30240(b) of the Coastal Act. The public parking lot must be moved to another less environmentally sensitive location on the project site. By simply allowing the general public to drive into the subdivision and park along the streets of the community and use the three vertical accessways, the proposal could meet the Coastal Act public access goal of distributing parking throughout the area.

Finally, the proposed park design is further inconsistent with the ESHA protection policies of the Coastal Act due to the location of the proposed multi-use pedestrian/bicycle trail, and the fill slope that contains the Bolsa Chica Street extension and parking lot with respect to the Eucalyptus ESHA. As proposed, approximately one-third of the trail length is adjacent to the Eucalyptus grove ESHA, and is too close to the ESHA. At one point the trail is only 10-12 feet away from the ESHA. The proposed 2-acre, 30 ft. high fill slope, which contains portions of the park entry road and parking spaces, is immediately adjacent to the Eucalyptus tree ESHA. Similarly, the trail alignment in other locations impact the burrowing owl and Tarplant ESHA. This park design seeks to capitalize on/encroaches into, ESHA and ESHA buffers for purposes other than to serve the public park. Those facilities within the upland habitat park for public park purposes must also be sited and designed so that the do not adversely impact the ESHA. As proposed, the park design creates the potential for significant human disturbance of the endangered and threatened species that use the Eucalyptus grove ESHA. Therefore, the proposed park design creates a conflict between public access and the protection of environmentally sensitive habitat areas that are protected by the Coastal Act. As detailed in Section D of this staff report, the Commission staff ecologist recommends a 100-meter ESHA buffer between the Eucalyptus grove ESHA and all other development, including roads, parking lots and other recreation facilities (Exhibit 20). However, Dr. Dixon explains that trails can be allowed within the ESHA buffer if they are located in the upper five (5) meters of the 100-meter buffer.

As detailed above, the proposed project as designed has serious public access and public recreation deficiencies and also creates significant impacts to Coastal Act protected land resources. There are feasible design alternatives available that can provide appropriate public access and passive recreational opportunities while protecting the adjacent environmentally sensitive resources as required by the Coastal Act. However, the proposed project must be significantly redesigned in order to bring it into conformance with the public access, recreation and land resources protection policies of the Coastal Act. Therefore, the project currently before the Commission must be denied.

F. SCENIC AND VISUAL RESOURCES

The Coastal Act seeks to minimize the alteration of natural bluffs and cliffs in the coastal zone in order to protect the scenic views to and along the coast. Section 30251 of the Coastal Act states:

Section 30251 Scenic and visual qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually

degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The applicant proposes grading at the current easterly edge of the bluff overlooking the Isolated Pocket Lowland, now owned by the State of California. The proposed 30-foot high fill slope, approximately 2 acres in size, constitutes significant landform alteration in the opinion of Commission staff geologist, Dr. Mark Johnsson (Exhibit 13). According to the applicant, the upper bench bluff edge grading is proposed in order to "restore" the bluff edge to its 1939 configuration. The bluff was altered in the early 1940's with the construction of two World War II gun embankments and the 1971 removal of material from along the slope overlooking the lower bench and the bluff above the Isolated Pocket Lowland, now owned by the State of California. The proposed bluff edge grading is visible from the Bolsa Chica Lowlands wetland trails below (Exhibit 18). Dr. Johnsson states, "The relative merits of such a "restoration" are debatable, but in my opinion it is clear that the proposed grading represents significant alteration of a natural landform." The proposed grading represents significant landform alteration in an area that currently contains scenic views and whose multi-million dollar wetlands restoration efforts will also restore and enhance the visual quality of the overall area by removing the existing extensive oil and gas facilities from the Lowlands. This grading is therefore inconsistent with Section 30251 of the Coastal Act.

The proposed fill slope would also be located within the proposed 100 ft. wide Eucalyptus grove ESHA buffer, immediately landward of the ESHA itself**.** Although the applicant has stated that the proposed bluff edge fill is to support public access and recreation, review of the project grading plans shows that this statement is not accurate. The proposed 2-acre fill slope will contain a portion of the Bolsa Chica Street, but it also contains and supports the rear yards of approximately nine residential lots (lots 13 - 21) under the proposed subdivision design. Bolsa Chica Street, a public road, provides the only public vehicular access and public parking into the entire 105-acre project site. The fill slope, 32 ft. wide road and 30-space parking area will be immediately adjacent to the Eucalyptus grove ESHA, at the same elevation as the tops of the Eucalyptus trees that are on the slope of the upper bench. Commission staff ecologist, Dr. John Dixon, recommends against this development adjacent to the ESHA, citing significant disturbance to the raptors that perch and nest in the treetops.

The proposed bluff edge grading constitutes significant landform alteration. Its purpose is not only the provision of public access, but is also to allow the extension of the residential development footprint. The proposed landform alteration is significant in that it will adversely impact scenic views from the Lowland trails within the now primarily publicly owned Bolsa Chica Lowlands. The visual impact of the grading should also be considered in light of the Bolsa Chica Wetlands Restoration Program that has as one of its goals the enhancement and restoration of the visual qualities of this important coastal area by removing the extensive oil and gas facilities.

It is indisputable that the numerous past activities on the Bolsa Chica Mesa have resulted in alterations to the natural landform of the Mesa, including the slope and bluff edge of the upper bench. The slope that the applicant is proposing to "restore" was graded in the early 1970's, prior to the Coastal Act to support development in adjacent Huntington Beach. Despite this previous grading, the Bolsa Chica Mesa remains a distinctive natural coastal landform that together with the Bolsa Chica Lowlands and wetlands, form an important ecosystem. Most areas of southern California have sustained a certain amount of alteration; however, it is also notable to consider areas, such as the project site, that have been left alone subsequently for almost 30 years, as landforms warranting protection. The Commission notes that most of the bluffs throughout the coastal zone have been altered, to some extent. This situation does not change the fact that coastal bluffs, including the bluffs at the project site, are natural landforms, which pursuant to Section 30251 of the Costal Act, should not be further significantly altered. This bluff area is visible from the public wetland trails below the project site. Therefore the proposed fill represents significant landform alteration, in an area whose scenic value is being further restored through the Bolsa Chica Wetlands Restoration project. The proposed bluff edge grading is also inconsistent with the Commission's action on the 2000 Bolsa Chica LCP.

Finally, the landform alteration is also inconsistent with Section 30240(b) of the Coastal Act in that the proposed fill will be located immediately adjacent to the existing Eucalyptus grove ESHA, causing significant adverse impacts to the threatened and endangered species that use the ESHA. As discussed in Section D of this staff report**,** all roads, parking lots, and other similar structures should not be located within the 100-meter Eucalyptus grove ESHA buffer. The applicant proposes to extend Bolsa Chica Street, with 30 public parking spaces at the new street end, into the proposed public park as the only public vehicular access to the entire site. The elimination of the proposed bluff edge fill will therefore necessitate major redesign of the proposed subdivision layout. The Commission is denying the proposed project as submitted. However, as detailed in the Alternatives section of this staff report, there are feasible less environmentally damaging alternatives to development of the upper bench of the Bolsa Chica Mesa with residential and public recreation land uses while avoiding significant landform alteration of the Bolsa Chica.

G. HAZARDS

Section 30253 Minimization of adverse impacts

New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

(4) Minimize energy consumption and vehicle miles traveled.

(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30253 of the Coastal Act requires that new development minimize risks to life and property in areas of high geologic, flood and fire hazard. The proposed Brightwater development includes approval of a subdivision to create 379 single-family home lots in a guard-gated community, a 2.5-acre private community park for the residents of the development, and a 28-acre public upland habitat park with 30 parking spaces. The active Newport-Inglewood Fault runs along the slope between the upper and lower benches of the Bolsa Chica Mesa (Exhibit 15). The setback zone for habitable structures, as recommended by the project geologist, and required under the Alquist-Priolo Act, lies on the slope between the upper and lower bench (the site of the proposed constructed wetlands and the detention basin), as well as a substantial portion of the proposed residual parcel located on the lower bench. Although all of the proposed residential lots are well set back from the 50 ft. fault line setback of the Newport-Inglewood Fault, the proposed residential water quality treatment system lies on the fault line as well as portions of the residual parcel.

The applicant has submitted geotechnical evidence, with which the Commission staff geologist concurs, that all proposed slopes are stable. Nevertheless, one proposed slope, 30 ft. high, 2 acres in size, is inconsistent with the preservation of scenic views due to its significant landform alteration. As designed, the back yards of approximately nine of the proposed subdivision are dependent upon this large fill slope.

Fifty-seven of the proposed 379 residential lots abut the proposed upland habitat park. As designed, 100% of the required fuel modification plan for the abutting residential lots is designed to occur within the public park. As detailed below, although the proposed residential lots are stable, the proposed development, as currently designed would require (1) a fire protection plan that is inconsistent with the ESHA protection policies of the Coastal Act, (2) the construction of a large fill slope, constituting significant landform alteration, on the bluff edge which is inconsistent with the visual resources protection policies of the Coastal Act, and (3) creates an irregularly shaped residual parcel on the lower bench, with an unspecified use, which contains, among other things, an active fault line running through a significant portion, calling the safety of any future development of the parcel into question.

Existing Geomorphology and Past Development Activities

The Brightwater residential project site is located on the upper bench of the Bolsa Chica Mesa and the slope between the upper and lower benches. The proposed residual parcel is located on the lower bench, at the toe of the slope separating the two benches (Exhibit 15). Existing ground elevations on the upper bench range from 30-50 ft. above mean sea level (MSL). The surface elevation of the lower bench is 10-30 ft. above MSL. The two benches are separated by a slope approx. 25 ft high with an average gradient of 10-15%. Also at the toe of the slope, running parallel to it, lies the surface trace of the Newport-Inglewood fault, suggesting that the slope is a "fault line scarp", created by differential movement across the fault. According to the Commission's staff geologist, Dr. Mark Johnsson, the Bolsa Chica Mesa is one of the few places in Orange County where a fault line scarp can be observed, and is often the site of college level geology class site visits to see this feature first hand (Exhibit 13). Grading and urbanization have destroyed most fault line scarps associated with the Newport-Inglewood fault zone.

The southeastern bluff edge of the project site has a steeper gradient than the slope separating the upper and lower benches. The bluff face averages 45% slope with some areas being near vertical. At the toe of the southeastern bluff edge is the Isolated Pocket Lowland and the EGGW Flood Control Channel. The southeastern bluff was formed by fluvial erosion by the Santa Ana River when its alignment flowed in this part of the lowlands. The natural topography of the Bolsa Chica Mesa has been modified over the past 100 years. Previous activity includes agricultural use, the grading of access roads for the construction of oil wells and oil/gas pipelines, construction (in the early 1940's) and demolition (in the 1990's) of two World War II gun emplacements or concrete bunkers, archaeological investigation, and excavation of portions of the bluff and slope edges to be used for fill for development in the City of Huntington Beach (Exhibit 19). All of the past development, with the exception of the demolition of the WW II bunkers and the later archaeological investigations, was done prior to the Coastal Act.

Development on the Bolsa Chica Mesa pursuant to coastal development permits approved by the Coastal Commission include, the demolition of the WW II bunkers in the early 1990's and several archaeological investigation (two meters square hand excavation units, trenches, auger holes and controlled grading) and data recovery has also occurred on the Bolsa Chica Mesa pursuant to coastal development permits issued between 1983 and 1990.[7]

1. Bluff/Slope Edge Delineation

[7] Several coastal development permits have been issued for archaeological investigation/salvage activities. The previous permits are discussed in Section ___, Cultural Resources, of this staff report.

Commission staff and the applicant spent several conversations and written correspondence dealing with the location of the bluff edge of the upper bench of the Bolsa Chica Mesa. The applicant contends that because of the prior activity on the mesa, including the slope and bluff edges, that they do not constitute natural landforms. The Commission staff geologist disagreed with this assessment and continued to ask for a delineation of the top-of-slope. The applicant also argues that the slope separating the upper and lower benches of the Bolsa Chica Mesa is not a bluff. Commission staff geologist concurs in the determination that the slope separating the upper and lower benches is probably not a bluff, given the gradual nature of the slope separating the two benches (Exhibit 13). However, Commission staff continues to believe that a delineation of the top-of-slope for the western edge of the project site is necessary because of its usefulness in evaluating various aspects of the project.

The applicant finally produced a map showing the top-of-slope between the upper and lower benches to be a line drawn part way down the slope (Exhibit 19a). Apparently this line was chosen because it corresponds to an interpolated line that is the top of a steep road cut on the slope. Although staff does not agree that the applicant's line conforms to the top of the actual altered slope, we do agree that the determination of top-of-slope is made difficult by the previous alteration that has resulted in the gradual rounding of the slope. Given the circumstances, Commission staff geologist indicated that, "it is probably best to determine the slope face on the basis of its measured gradient, which is markedly steeper than the very gentle gradient of the mesas above and below".

The applicant also produced a map containing a delineation of the edge of the river bluff on the southern edge of the upper mesa, overlooking the Lowlands. The applicant drew the line using the guidelines of the California Code of Regulations, Section 13577(h)(2). Commission staff geologist review of the applicant's bluff edge delineation found that while there are some small areas of disagreement, there is one major discrepancy. The discrepancy is the area of the large borrow pit where the applicant is proposing a 30 ft. high fill slope, approximately two acres in size (Exhibit 15). The applicant places the top of bluff at the outer edge of the cut. However, Section 13577(h)(2) states, that in cases where there is a step like feature that, ". . . the landward edge of the topmost riser shall be taken to be the cliff edge". Following the above-cited Regulations, Commission staff geologist draws the bluff edge considerably inland of the applicant's line (Exhibit 13).

2. Fuel Modification

Although the proposed project is not located within a high fire danger area, the Orange County Fire Authority (OCFA) is still requiring the applicant to prepare a fuel modification plan to reduce the potential for fire damage to property and life. The applicant received approval of their Conceptual Fuel Modification Plan from OCFA in August 2002. However,

OCFA approval of the Precise Fuel Modification Plan is necessary. The County fuel modification requirements are:

> **Zone A** – provide a minimum 20 feet wide level graded area at the top or base of slope and immediately adjacent to the protected development, no combustible structures, fully irrigated with automatic irrigation system, all vegetation shall be highly fire resistant and shall not include undesirable combustible vegetation.
>
> **Zone B** – provide a minimum 50 feet wide irrigated area and must be planted with plants from the approved OCFA Plant List. No combustible construction is allowed.
>
> **Zone C and D** – are considered the non-irrigated, thinning zones. Zone C is 50 feet in width and requires 50% thinning with removal of all dead and dying undesirable species. Zone D is 50 feet in width and requires 30% thinning with removal of all dead and dying growth and undesirable species. Specific requirements for these zones include: all fuels be reduced to a maximum of 8-12 inches in height and native grasses, when used, shall be cut after annual seeding and shall not exceed 8 inches in height. All plants within these zones must be chosen from the approved OCFA plant list. Trees which are being retained with the approval of the agency having jurisdiction shall be pruned to provide clearance of three times the height of the under story plant material or 10 feet, whichever is higher. Dead and twiggy growth shall also be removed. All existing plants or plant grouping except cacti, succulents, trees and tree-form shrubs shall be separated by a distance of three times the height of the plant material or 20 feet, whichever is the greater.
>
> The Guidelines do however allow special consideration for rare and endangered species, geologic hazards, tree ordinances, or other conflicting restrictions as identified in the environmental documents.

The applicant has requested that the above fuel modification requirements be modified due to the existing Eucalyptus tree grove ESHA that must remain, as required by both the Department of Fish and Game and the California Coastal Commission and recognized by the courts. The Eucalyptus grove ESHA would be in Zone D of the fuel modification plan using the OCFA Guideline standards. In August 2002, the applicant filed with OCFA a "Request For Use Of Alternate Means And Methods For Complying with OCFA Guidelines". They also requested the alternate means and methods for the planting of wetland and coastal prairie habitats within the fuel modification plan area. The plans for the upland habitat park also show coastal bluff scrub vegetation being used in the northwestern portion of the park near Warner Avenue, but not in the southeastern portion near the Eucalyptus grove ESHA (Exhibit 14).

The proposed public upland habitat park, located on the slope between the upper and lower benches, serves the dual role of providing the full 170 foot wide (Zones A – D) required fuel modification area for the 57 residential lots that are proposed on the slope

and bluff edges of the upper bench of the mesa (Exhibit 14a). The upland habitat park is 28 acres in size, including the existing 5-acre Eucalyptus grove ESHA. Based on the current design of the subdivision, 731,000 sq. ft. or 17 of the 28 acres of the upland habitat park is required fuel modification area. Therefore, nearly three-quarters of the public park must be planted, irrigated and maintained in a manner that provides fire protection for the adjacent private residential use. The required fuel modification area also includes 33,500 sq. ft. or 0.8 acres of the 5-acre Eucalyptus grove ESHA, according to OCFA figures.[8] Of the total 57 lots that abut the public park, 25 residential lots abut the proposed 100 ft. wide Eucalyptus grove ESHA buffer. However, it is the fuel modification requirements for 16 of the lots that encroach into the ESHA, affecting 0.8 acres of the ESHA (Exhibit 14).

One of OCFA responses to the fact that there are Eucalyptus trees within the fuel modification zone was that the applicant could move the proposed houses back 50 feet to avoid this issue.[9] OCFA also stated that the applicant could propose alternate construction to the structures. The applicant has applied for approval of Alternate Means and Methods to the OCFA fuel modification guidelines. In addition to use of alternative construction methods for the 16 homes whose Zone D fuel modification requirements overlap with the Eucalyptus ESHA (installing automatic sprinklers in the homes, and Class A construction of all roofs of the affected buildings), the applicant is proposing modifications to both Zones C and D, in lieu of moving the structures back 50 feet. Those changes include the irrigation of both zones where they are adjacent to the overlap of Zone D and the Eucalyptus ESHA. According to the applicant, the irrigation of this area increases its equivalent width, when compared to non-irrigated zones.

The Department of Fish and Game (DFG) in their review of the proposed fuel modification program, expressed concerns over the non-compatible goals of habitat protection and fire protection for adjacent habitable structures. DFG noted in its April 24, 2003 review of several documents associate with the Brightwater development approval that, a modified plant palette has been prepared to avoid native coastal sage or coastal bluff scrub species prohibited by the County's list of undesirable species including California sagebrush (Artemisia californica) and other common coastal sage scrub species. Also cited by DFG is the irrigation of coastal sage scrub (css) that is being protected in place and the normal requirement that css vegetation be thinned and removed as stated above in the Zones C and D requirements. Concern was also expressed over the limited list of species proposed for the coastal prairie plant community, especially given the abundance of non-native grasses and forbs that will compete with this new habitat. DFG suggested that additional local native species be added to the coastal prairie palette in order to increase native diversity and include native coastal grassland species that are more disturbance

[8] These figures were obtained from the applicant on Attachment A of their 8/12/02 correspondence to Brett Anderson of OCFA concerning the Brightwater Conceptual Fuel Modification Plan, OCFA Service Request No. 68164, page 2 of 2.

[9] OCFA SR# 68164 (1.9 Conceptual Fuel Modification), Brightwater Tentative Tract #15460, Unincorporated Huntington Beach, Bret Anderson of OCFA to FORMA, April 26, 2002, page 2, item 8. This letter is attached as Exhibit 14.

adapted for use in the detention basin. Finally, DFG commented on the likely results of the introduction of irrigation, mowing, thinning and other habitat disturbance that will be created by using the upland habitat park, including the Eucalyptus ESHA buffer, for fuel modification purposes. Specifically cited examples are the negative alterations of native arthropod communities and vegetation thinning requirements requiring the removal of species such as California sagebrush.

In response to the DFG concerns noted above, the applicant stated that they will work with OCFA in the required Precise Fuel Modification Plan approval process to avoid or minimize any thinning of existing coastal sage scrub that is being retained and to keep its irrigation to a minimum. The applicant's biological consultant further noted that they were allowed by OCFA to retain existing css in another coastal project without any thinning requirements after requiring the homes to implement similar alternate construction methods. Also irrigation is expected to be infrequent and minimal, and applied only when needed during the dry summer period. Further, the applicant's consultant stated that many native species can tolerate occasional summer irrigation, although they do not need it, including the species identified in the coastal bluff scrub palette for the project.

DGF ultimately concurred with the applicant that the Eucalyptus ESHA will not be affected by the proposed project if all of the specific construction and management activities are followed. Nonetheless, DFG also stated that they "do not consider fuel modification zones, regardless of their native species content, to be considered acceptable as mitigation for biological impacts."

3. Proposed Grading

As currently designed, the 105.3-acre upper bench portion of the Brightwater project includes 630,000 cubic yards (cy) of balanced grading. No grading is proposed on the lower bench residual parcel. A breakdown of the grading reveals 330,000 cy of cut, 300,000 cy of fill and 30,000 cy of overexcavation or expected shrinkage of cut material due to compaction of the fill material. The grading plan retains the existing grade differential between the upper and lower benches and also aims to restore the transitional slope to a natural appearance along the proposed public park area, according to the application submittal. No grading is proposed within the existing Eucalyptus grove ESHA or two freshwater wetlands. However, the area adjacent to the 0.2 ac pocket wetland on the central slope area will be contour-graded to construct a series of interconnected wetlands and a detention basis to treat the residential low flow and storm water run off of the project as a part of the Water Quality Management Plan (WQMP) (Exhibit 9).

The majority of the site work is to smooth out high points and the fill of low points including areas where roads, archaeological investigations and similar ground disturbances have occurred over the years. With the exception of the fill of the previous borrow area and the

removal of the mound containing the crushed concrete from the WW II bunkers, the proposed grading plan shows that a majority of the cut areas will be 0 to 5 feet. The area nearest the project entry at Warner and Los Patos will receive the greatest cut, 10 to 20 feet and then 5 to 10 feet further into the site (Exhibit 15). The majority of the fill areas are 0 to 5 feet in depth but 5 to 10 feet along Los Patos and through the center of the site. Along the area abutting the upland habitat park, approximately 12 lots will receive 10 to 20 feet of fill. Additionally, approximately nine lots located at the current southeastern bluff edge where the 30 foot high fill slope is proposed will receive up to 30 ft. of fill on some portion of the lots. Significant landform alteration should not be allowed to occur at the bluff edge in order to extend the development footprint. The Commission has approved significant landform alteration (such as the construction of large fill slopes) in scenic areas, following such events as massive landslides. However, the Commission has allowed these large fill slopes where this method of stabilization was necessary to protect existing structures from further geologic danger and there was no other feasible alternative method that would have less of an impact on the scenic values of the area. However, this is not the case with the proposed project. There are no structures that are in danger. The applicant simply wishes to expand the development area of site instead of locating the proposed public improvements (the park entry road extension and public parking to serve visitors to the proposed upland habitat park) landward of the existing bluff edge.

The one area where there will be the most significant amount of earthwork and landform alteration is the borrow site on the south edge of the bluff overlooking the Isolated Pocket Lowland. The application proposes a 30-foot high fill slope at the southeastern edge of the bluff and is approximately 2 acres in size. The applicant states that there are two purposes for the fill: to restore the bluff to its 1939 contours and to allow the placement of the extension of Bolsa Chica Street and 30 public parking spaces for public use of the proposed 28-acre upland habitat park. Bolsa Chica Street is proposed as the only public vehicular access to the site and the park, although it also is proposed to be gated, like the residential community. However, a review of the grading plan shows that the fill also extends the rear yards of approximately nine lots that abut the park. As explained in the preceding section of this staff report, Scenic and Visual Resources, the proposed 2 acre, 30 ft. high fill slope on the bluff edge constitutes significant landform alteration and results in adverse visual impacts to visitors using the public trails in the Bolsa Chica Lowlands, below the project site. The grading and proposed uses on the fill slope also are detrimental to the viability of the raptors that use the Eucalyptus grove ESHA. The paved road and 30 space parking lot, people, and noise will be placed at approximately the same elevation as the tops of the trees that are on the bluff, as detailed in the preceding ESHA and Other Important Land Resources section of this staff report. As discussed in the Scenic and Visual Resources section of this staff report, the proposed grading of the bluff edge cannot be found consistent with Sections 30251 or 30240 (a) and (b) of the Coastal Act. However, the remainder of the grading does not raise an issue of consistency with Section 30253 of the Coastal Act.

4. Newport-Inlgewood Fault Zone

A portion of the proposed subdivision is traversed by the Newport-Inglewood fault zone, generally recognized as the source of the 6.25 magnitude Long Beach earthquake in 1933 that killed 120 people and resulted in the passage of the Field Act. The fault traverses the gentle slope between the upper and lower benches and the southeastern and northwestern portions of the proposed lower bench residual parcel (Exhibit 15). The fault has also been designated an Earthquake Fault Zone by the State Geologist under the Alquist-Priolo Act. However, the area has not been identified as one susceptible to earthquake-induced landslides or liquefaction hazard on the California Geological Survey Seismic Hazard Map under the Seismic Hazard Mapping Act, according to Dr. Johnsson (Exhibit 13).

The applicant has prepared and submitted for Commission staff review the necessary reports, including trenching and mapping, pursuant to the Alquist-Priolo Act. The studies verify that the North Branch Fault (of the Newport-Inglewood Fault Zone) is considered active. The surface trace of the fault was identified through detailed trenching and mapping, and a 50-foot setback from all fault traces was identified in accordance with the Alquist-Priolo Act, that prohibits structures for human habitation to be built across an active fault. Commission staff geologist's review of the fault data shows that the fault seems to be well established at its present location. Dr. Johnsson concurs that the 50-foot setback is adequate for the proposed upper bench residential development given that no residential lots of the subdivision abut the mapped fault setback line.

However, the fault line traverses all five of the proposed created wetlands and the southern portion of the proposed 1.3-acre detention basin lies within the setback line of the active fault. According to Dr. Johnsson, these water quality treatment pools could be damaged during an earthquake. However, flood damage would probably not be significant since the wetlands are excavated below grade and because there are no structures on the lower bench below the created wetlands. However, the location of earthquake fault could very well pose a danger to development of the proposed lower bench residual parcel.

As shown in Exhibit 15a, the active earthquake fault traverses the southeastern 500 feet of the residual parcel and approximately 1,000 ft. of the northwestern portion of the irregularly shaped lower bench residual parcel. For this reason, among others, staff recommends that the Commission deny the creation of this parcel given its seismic hazard constraints and the fact that the applicant has refused to identify the intended use of the proposed parcel nor demonstrate that the parcel can be developed consistent with the geologic hazard and all applicable Chapter 3 provisions of the Coastal Act.

3. Slope Stability Analysis

Commission staff geologist, Dr. Mark Johnsson reviewed the proposed grading plan and requested geotechnical information of the applicant in order to determine if the proposed project assures stability and structural integrity, will not contribute to erosion or geologic instability or destruction of the site or surrounding property or require the construction of protective devices that would substantially alter the natural landforms along the bluffs. The applicant's geotechnical consultant prepared direct shear tests on relatively undisturbed site samples in order to derive soil strength parameters for use in the slope stability analyses of the proposed slopes in the project based on the latest grading plan[10].

Commission staff geologist concurs with the applicant's geotechnical slope stability analyses demonstrating that all proposed slopes would be stable. However, due to the potential for surficial instability, Dr. Johnsson recommends that the applicant abide by the consultant's recommendations contained in one of the submitted reports regarding drainage and landscaping of the slopes.[11]

H. MARINE RESOURCES – WATER QUALITY

New development can have significant adverse impacts on coastal water quality, and thus, biological productivity, during grading and construction if adequate erosion and runoff control measures are not properly designed and implemented. New development can also adversely affect water quality after construction if permanent pollution prevention, reduction and treatment measures are not provided and maintained, for the life of the development. Sections 30230 and 32031 of the Coastal Act require the protection of marine resources by protecting the quality of coastal waters. Specifically, these policies require:

Section 30230 Marine resources; maintenance

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 Biological productivity; water quality

[10] Originally the County of Orange approved a grading plan that required 220,000 cubic yards of export and a 40-ft high fill slope on the southeast bluff edge instead of the current 30-foot high slope. The applicant planned to export the material to the adjacent Parkside Estates site in the City of Huntington Beach. When staff requested evidence of approval for the export, the applicant modified the grading plan to balance cut and fill operations on-site.

[11] AMEC Earth and Environmental, Inc. 1997, "Geotechnical evaluation report, Phase I rough grading plans, Vesting Tentative Tract 15460, Bolsa Chica Mesa, South of Warner/Los Patos Avenues, Orange County, California:, 60 p. geotechnical report submitted to the Koll Real Estate Group dated 1 December 1997 and signed by D. Dahncke (GE 2279) and S.T. Kerwin (CEG 1267).

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The 105.3 acre Brightwater project site consists of 379 single family residences, community recreation center with a swimming pool, 2 million gallon underground drinking water reservoir and open spaces areas. The impervious surfaces and activities associated with this scale of residential development represents a potentially significant impact to coastal resources, including portions of the Bolsa Chica wetlands, Huntington Harbor and ocean waters. The County of Orange required the preparation of a hydrology/water quality study in the review of the project at the local level. The applicant also prepared a Master Drainage Plan, Storm Water Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP). These documents were submitted to Commission staff and reviewed by the Commission's Water Quality Unit.

The Brightwater development site is currently undeveloped and no off-site drainage flows onto the site. The mesa is vegetated with primarily non-native grassland, ruderal vegetation and several vegetated ESHA areas**.** There are also approximately 17 acres of dirt roads or other non-vegetated areas on the site. The hydrology study evaluates the existing hydrologic condition and divides the site into several drainage areas (Exhibit 7, Existing Hydrology). The majority of the project area drains to the south under existing conditions. The existing flows that drain to the south first drain to despressional areas that act as detention basins. The flows ultimately discharge to the Isolated Pocket Lowland via an existing 24 inch corrugated metal pipe (CMP) southeast of the project site. The Isolated Pocket Lowland area is located between the EGGW Flood Control Channel and the project site and currently has no direct connection to the ocean. The area now belongs to the State and will be restored as part of the Bolsa Chica Wetlands Restoration Project.

In recognition of Huntington Harbor's listing as a 303d impaired water body (for copper, nickel, Dieldrin, PCBs and pathogens) and flooding problems in Bolsa Chica Street, the project will divert most of the existing flows away from Huntington Harbor to Drainage Area B (Exhibit 8, Proposed Hydrology). In the developed condition, Drainage Area A will be reduced from 5.03 to 2.76 acres and Drainage Areas F and G will be reduced from 21.19 to 3.63 acres for a total decrease of roughly 21 acres from the Huntington Harbor watershed. The areas diverted away from Huntington Harbor will be added to Drainage Area B. Most of the developed portion of Drainage Areas C and D will also be diverted to Drainage Area B. The remaining areas in these watersheds will be only the areas of the proposed 28-acre upland habitat park and undisturbed areas. The developed portion of Drainage Area E will also be diverted to Drainage Area B and the slope area below the

public park will drain to Drainage Area D. Only natural slope area will continue to drain toward the Shea Homes property.

Although the total area that flows to Drainage Areas A, C, D, E, F and G will be decreased, runoff rates, in some cases such as Drainage Areas A and D, will be increased due to the addition of impervious surfaces. Also, the passive nature park will contain impervious surfaces including a 12 ft. wide, approximately 3,500 ft. long pedestrian/bicycle trail and Bolsa Chica Street at 32 ft. in width and 30 parking spaces. These features represent a significant amount of impervious surface area. Drainage Area B will include the majority of the developed area and receive all of the runoff from the diverted areas increasing the tributary area from 45.4 to 80.9 acres. The applicant proposes to consolidate the runoff to this single drainage area and provide a water quality treatment system to treat the runoff. However, all areas will have standard structural and non-structural best management practices (BMPs) as indicated in the Brightwater water quality management plan (WQMP).

The non-structural BMPs include education for property owners, tenants and occupants; activity restrictions (e.g., no auto repairs or oil changing on site, no discharge of landscaping debris to storm drains, no clean up from painting in paved areas, no washwater from construction activities into stormdrains); common area landscaping maintenance; BMP maintenance requirements; common area litter control; catch basin inspections; and requirements for regular sweeping on private streets and parking lots. Structural BMPs include a vegetated treatment system (referred to as a constructed wetland in the WQMP), media filters for storm drain inlets (on the portion of the site draining to Huntington Harbor), common area efficient irrigation, common area runoff minimizing landscape design, energy dissipating riprap at new stormdrain outlets and inlet trash racks.

The Brightwater development proposes to retain the dry season low flows on site by diverting it to a Vegetated Treatment System (VTS[12]) consisting of series of five freshwater ponds located within the proposed upland habitat park on the slope separating the upper and lower benches (Exhibit 9). All dry weather flows, and runoff from storms that are smaller than 0.80 inches in 24 hours (the design storm[13]) will be diverted to the VTS. The freshwater ponds will be constructed at varying depths with the goal of providing various habitat opportunities for wildlife and native plants. During wet weather storm events, runoff from the design storm will be released from the VTS over a 24 to 48 hour period into the adjacent 0.2-acre existing pocket wetland. The VTS and the overflow system are designed so that the amount of water flowing into the existing on-site pocket wetland is the same as that under existing conditions. In turn, when the existing on-site pocket wetland

[12] The CCC water quality staff and non-point source staff from other state agencies prefer to call these BMPs Vegetated Treatment Systems to make it clear that the primary purpose is treatment of water quality and that any habitat benefits are secondary. This is to distinguish VTS BMPs from constructed wetlands where the primary purpose is habitat creation.

[13] This design storm is slightly larger than the standard 85th percentile storm event for the project area, which is 0.75 inches.

reaches capacity it will flow into a 1.3-acre detention basin. If the VTS reaches capacity during large storms (greater than the 0.8 inch design storm) the additional runoff will be diverted directly to the detention basin.

The detention basin will be located at the southern bluff edge in an existing depressional area and riprap will be placed at the outlet in order to avoid erosion of the off-site lowland area. It will be designed to primarily to detain the peak flows during large storms for a few hours to improve flood control so that the maximum rate of flow to the Isolated Pocket Lowland is not significantly increased above the existing flow rate. It will detain the peak flow by routing the discharge through an existing 24-inch corrugated metal pipe prior to discharge to the pocket lowland. It is not considered to be part of the water quality treatment program, however discharge from small storm events may be partially treated by evapotranspiration, infiltration or adsorption.

The detention basin however encroaches into an area that has been determined by Commission staff senior ecologist to be a burrowing owl environmentally sensitive habitat area (ESHA). Further, two of the five proposed created wetlands impact a population of Southern Tarplant that has also been determined to be Coastal Act protected ESHA (Figure 1 of Exhibit 20).

The Water Quality staff of the Coastal Commission has reviewed and evaluated the WQMP to determine whether it meets its stated goals and whether it is in conformity with the marine resources protection policies of the Coastal Act (Exhibit 10). The Water Quality Unit concludes that the WQMP, which treats the majority of the project runoff through the proposed Vegetated Treatment System, could significantly reduce the discharge of polluted runoff from the development if certain necessary or feasible modifications are made to the overall treatment program. Therefore, as proposed the WQMP is not in conformity with Section 30230, 30231 and 30240 of the Coastal Act.

First, if a Vegetated Treatment System (VTS) is used as a part of the WQMP it must be built following the guidelines of the California Stormwater Quality Association (CASQA). The California Stormwater Quality Association (CASQA) BMP handbook recommends that the permanent pool of water for a constructed wetland BMP be 2 times the water quality volume (the volume of runoff from the design storm event). The most recent design provided by the applicant only has about 1.2 times the water quality volume in the permanent pool.

The location of the proposed detention basin and two of the five proposed created wetlands encroach into the existing burrowing owl habitat and Southern Tarplant ESHA that have been determined to be Coastal Act protected ESHA. This encroachment is inconsistent with Section 30240 of the Coastal Act as detailed in the Biological Resources section of this staff report. Therefore, there may be restrictions on the size and shape of the VTS due to this site constraint and other site requirements. These site constraints may make it difficult to design and build a VTS that will substantially conform to the CASQA

guidelines. While this should not necessarily preclude the use of a VTS, it may indicate that additional source control and/or treatment control BMPs are needed in order to properly protect water quality. Any efforts to reduce site runoff during storm events would help to maintain natural site hydrology and minimize impacts to the off-site resources.

To add to the overall reliability and effectiveness of the WQMP, vortex separation BMPs should be provided in the storm drain system upstream of the created wetlands and detention basin. These BMPs would remove coarse particulates, trash and other debris and help to maintain the aesthetic and habitat values of the constructed wetlands and detention basin.

Additional efforts to reduce impervious surfaces should also be included in the WQMP given the size of the development and the sensitivity of the adjacent coastal resources. For example, within the proposed habitat park the 12 ft. wide trail, 32 ft. wide road extension and 30-space public parking lot will all be paved. These impervious surfaces are within the proposed native habitat park, within close proximity to the existing Eucalyptus grove ESHA. The 12 ft. wide trail is proposed to be located as close as 10 -12 feet away from the Eucalyptus grove ESHA (Exhibit 4). BMPs that reduce the amount of runoff can feasibly be added to the WQMP. The incorporation of Low Impact Development features such as the use of permeable pavement (in driveways, roads and parking areas) and discharge of roof runoff to landscaping areas (instead of allowing the potential for direct runoff to the streets and stormdrains). The WQMP should implement any other feasible BMPs that reduce site runoff.

Various individuals, organizations and agencies have expressed concerns over the Brightwater WQMP. Those concerns include: potential adverse impacts to the Isolated Pocket Lowland wetlands due to the volume of the project (freshwater flows) and the remaining pollutants in the discharge including a recommendation that post-development monitoring of the Isolated Pocket Lowlands be done in order to assess project effects on vegetation; adverse impacts to the mud flats of Outer Bolsa Bay; the adequacy of the proposed fossil filter catch basin inserts in removing pollutants, especially coliform bacteria and nutrients and the long term performance of the filters; given that the created wetlands are bypassed during larger storms, the treatment of the detention basin alone will not remove a considerable proportion of pollutants before their discharge into the Isolated Lowlands; the WQMP does not provide information on total loading; potential adverse cumulative impact caused by use of pesticides, fertilizers and other chemicals by individual homeowners, along with animal waste; low flows and first flush flows should be diverted to the OC Sanitation District treatment plant, consistent with the Coastal Commission's action in November 2000; long-term maintenance of the water quality system and annual monitoring is needed; project applicant should prepare water quality studies for receiving waters (including TMDLs for the Bolsa Chica Bay prior to Brightwater development; the adequacy of the project erosion control plan; and, that the project's Santa Ana Regional Water Quality Control Board approval from 1998 may no longer be valid.

Considerable concern has been expressed about potential impacts to the adjacent State owned Isolated Pocket Lowlands, especially given the extensive 1,100-acre wetland restoration effort. When the applicant sold the Isolated Pocket Lowlands area to the State the applicant retained a drainage easement to accommodate the flows from the proposed development (Exhibit 12). However, the discharge must be done in a way that it does not adversely impact water quality or the biological productivity of the wetlands. Staff discussed these concerns with personnel from two of the eight State and Federal agencies that make up the Bolsa Chica Steering Committee charged with the restoration of the Bolsa Chica Wetlands[14]. Their response was that they are aware of the Brightwater plans for the Bolsa Chica Mesa and that the consensus of the Steering Committee is that they do not object to the proposed discharge to the Isolated Pocket Wetland area. Further, the Steering Committee feels that the low freshwater volumes into what will be muted tidal habitats would create very localized but beneficial biological diversity, and not likely to contribute contamination. During large storm events, when the Brightwater runoff increases and bypasses the proposed created treatment ponds, the EGGW Flood Control Channel is also producing overwhelming flows that will exceed the Brightwater runoff volumes, and thus its influence, many times over.

Concerns about the need for a monitoring program or a quantitative estimate of the total loading of pollutants to the waters downstream are related in that they presume that the quality of runoff is regulated by quantitative regulatory standards. In fact, the control of polluted runoff nationwide and in California is regulated by requiring dischargers to use nonstructural and structural Best Management Practices (BMPs) to reduce the impact of polluted runoff. These BMPs have been tested and shown to provide significant water quality benefits when properly designed, installed and maintained. Typically in California, they are designed to capture, treat or infiltrate the runoff from the 85th percentile 24 hour storm event, effectively dealing with most small storms and the first flush from larger storms.

The strategy of requiring structural and nonstructural BMPs is a significant first step towards dealing with polluted runoff; a water quality problem that is widespread, caused by the actions of many people and where responsibility cannot be readily assigned to specific parties. A large variety of BMPs have been approved by federal and state agencies for their ability to reduce the pollutants that are found in polluted runoff. The suite of BMPs considered appropriate for California are found in the California Stormwater Quality Association (CASQA) BMP handbook. While the Coastal Commission has, on occasion, required monitoring of discharge from specific developments, this has been in response to the proposed use of management practices that are not designed to the specifications in the CASQA BMP handbook due to site-specific conditions or innovative methods in need of additional information to document effectiveness.

[14] Personal communication between Teresa Henry, Coastal Commission staff, Jack Fancher of USFWS and Bob Hoffman of NMFS in February and March 2004.

Concerns about potential adverse cumulative impact caused by use of pesticides, fertilizers and other chemicals by individual homeowners and the potential effects of animal wastes are valid and these pollutants are a potential problem throughout our coastal communities. In response to these concerns, the WQMP includes both non-structural and structural BMPs such as education for property owners, tenants and occupants; common area landscaping maintenance; common area litter control; catch basin inspections; requirements for regular sweeping on private streets and parking lots to deal with these issues; and the vegetated treatment system. The homeowner education BMP is intended to make individuals aware that misuse of water and household chemicals can have harmful impacts on the nearby wetlands, harbor and ocean. The Vegetated Treatment System, **in combination with the recommendations above,** can be an effective BMP for minimizing the impacts of irrigation runoff, pesticides, fertilizer and pet wastes, especially in combination with source control of these pollutants through best management practices in the common areas and private areas of the development.

Another concern that has been expressed is the adequacy of dry season runoff to sustain the vegetation of the VTS and maintain its intended function of cleansing the nuisance flows. The potential for wetland plant growth to be affected by dry conditions is legitimate since source control efforts will work to reduce or eliminate dry season runoff thereby minimizing the transport of sediment, pesticides and fertilizer to surface waters and replicating natural runoff conditions in the Southern California environment. Nevertheless, the ability of the VTS to remove pollutants is only partly due to the active growth of wetland plants. Other removal mechanisms include adsorption of pollutants to soils and living or dead plant materials, infiltration of water into the soil, gravitational settling, physical filtration and microbial decomposition and evapotranspiration. Evidence from the constructed wetlands at Playa Vista indicates that pollutant removal does not significantly decrease during the dry season[15].

There has been some discussion of the possibility of diverting all of the dry weather flow and first flush runoff to a conventional sewage treatment system. While diversion has occurred for several major residential developments in Southern California over the past few years, it is not generally required by the water quality agencies or by the Commission. In some cases, diversion can be a quick fix to beach water quality problems, but it is an end-of-pipe solution that tends to de-emphasize the responsibility of upstream landowners to control sources of pollution, maintain site hydrology near natural conditions and minimize or eliminate dry weather runoff (e.g. runoff from poorly controlled irrigation systems). In addition, diversion of runoff to a sewage treatment plant would require the governing board for the plant to find that there is adequate capacity to treat the additional water. As sewage treatment plants approach their design capacity, governing boards can be expected to refuse to treat urban runoff if that would reduce their capacity to treat residential wastewater. In this case, the combination of source control and treatment control BMPs avoids the need for diversion to a sewage treatment plant and is a more sustainable solution.

[15] Personal communication, Xavier Swamikannu, Los Angeles Regional Water Quality Control Board.

In conclusion, Commission Water Quality Unit staff has reviewed the WQMP and supporting documents as listed above. If the WQMP is modified consistent with the above recommendations concerning additional structural BMPs and the design of the VTS to conform with the CASQA standards, the WQMP for the Brightwater development will be comparable in terms of the level of water quality treatment to other similarly sized developments recently reviewed and approved by the Commission. Further, if the above recommendations are implemented and VTS is sited to avoid impacts to the identified ESHAs, the proposed project will be consistent with the water quality and environmentally sensitive habitat area protection policies of the Coastal Act.

J. ALTERNATIVES

As detailed in the preceding sections of this staff report, the proposed project is inconsistent with the public access, recreation, marine resources, land resources including environmentally sensitive and cultural resources, and the visual resources protection policies of the Coastal Act. However, none of these inconsistencies is a direct result of the fundamental nature of this proposed project as a residential subdivision and habitat park. Thus, these inconsistencies do not necessarily mean that a fundamentally similar project cannot be built. Moreover, the Brightwater development site, including the 16-acre residual parcel being created by the proposed subdivision, is 121 acres in size and is relatively flat. Therefore, the redesign of the subdivision and the development of the site consistent with the policies in Chapter 3 of the Coastal Act are eminently feasible. However, a substantial redesign of the proposed subdivision including the road layout and physical development of the project site is necessary in order to avoid significant adverse impacts to the ESHA and other significant land, visual and marine resources of the site and to provide meaningful public access and passive recreational opportunities, as required by the Coastal Act.

In order to bring the development into conformity with the public access and recreation provisions of the Coastal Act, the subdivision streets must be open to public vehicular, pedestrian and bicycle use and the public must have access to the proposed 0.6 mile long trail at locations other than the trailhead and the end of the trail along Warner Avenue, just as the residents do. The streets of the 70-acre residential community must be available for public parking in order to distribute public access and recreational use of the passive park throughout the entire park area and avoid overusing any one area, especially where it might focus on any protected ESHA.

The 114 parking spaces along Los Patos Avenue can be used to truly facilitate public access to the bluff park only if the project is redesigned to provide a pedestrian gate along Los Patos Avenue to allow those who park in these off-site spaces a more direct route to the park. A gate could be provided near Lynne Street that is approximately at the mid-point of the parking area and is also adjacent to the proposed 2.5-acre private recreation center

(Exhibit 4). A public walkway could be easily accommodated adjacent to this common area. The public access signage program must also be improved to include signage at locations other than the intersection of Warner Avenue and Bolsa Chica Street to inform more members of the public of the location of nature park and scenic trail.

In order to bring the project into conformance with the land resources protection policies of the Coastal Act, the following changes to the project would have to occur: (1) elimination of the proposed landform alteration at the southeastern bluff edge; (2) provision of a 100-meter Eucalyptus grove ESHA buffer and elimination of roads, parking lots, recreational facilities (with the exception of trails[16]) and all fuel modification within the ESHA and ESHA buffer; (3) elimination of the proposed impacts to the burrowing owl ESHA and the provision of a 50-meter burrowing owl ESHA buffer; (4) mitigation for the loss of raptor foraging habitat (annual grasslands and ruderal vegetation) at a ratio of 0.5 (preservation):1 (displacement), to be located adjacent to (and potentially including), the Eucalyptus tree ESHA buffer and burrowing owl buffer areas; and (5) elimination of the proposed translocation of the two populations of Southern Tarplant that have been determined to be ESHA, retain them in place and provide a 50-foot Tarplant ESHA buffer around each ESHA population; (6) elimination of impacts to coastal sage scrub and the provision of a 50 foot buffer; and (7) elimination of the creation of the proposed 16 acre residual parcel or the applicant must propose a specific use for the parcel and demonstrate that the parcel can be developed for that use consistent with all applicable Chapter 3 policies of the Coastal Act, including, but not limited to, the geologic hazards and land resources protection policies.

There are other project features that must be modified in order to bring the development into conformity with the applicable Chapter 3 policies of the Coastal Act. They include, but are not limited to, changes to the proposed water quality management plan to include filtering devices on the storm drains before the runoff flow into the proposed created wetlands or discharge to the storm drain system that discharges into Huntington Harbor; the relocation or redesign of the proposed vegetative treatment system (created wetlands and detention basin) due to their impacts to the burrowing owl habitat ESHA or Tarplant ESHA, as currently designed.

As currently designed, approximately 55 of the proposed 379 residential lots along the bluff/slope edge, the detention basin and two of the proposed five created water quality treatment wetlands are sited such that they impact the existing Eucalyptus grove ESHA or the burrowing owl or Southern Tarplant ESHAs. The impacts are caused by their proposed locations or their fuel modification requirements. Further, approximately four additional residential lots and approximately two-thirds of the proposed 2.5 acre private recreation center near Los Patos Avenue impact the Southern Tarplant ESHA that surrounds the Los Patos seasonal wetland.

[16] A paved pedestrian/bicycle trail may be allowed in the Eucalyptus grove ESHA buffer provided it is located in the uppermost five meters of the 100-meter buffer.

In summary, approximately 60 residential lots out of the proposed 379 lots cause significant adverse impacts to environmentally sensitive habitat areas and other sensitive land resources. This represents 16% of the proposed residential lots. Additionally, the buffers around the Eucalyptus grove ESHA, the burrowing owl ESHA and the Tarplant ESHAs must be increased to adequately protect the viability of the habitat. The applicant may choose however to redesign the subdivision by also changing the internal road layout given the changes that would be necessary to the proposed alignment of the Bolsa Chica Street extension to avoid encroachment into the larger Eucalyptus and coastal sage scrub ESHA buffers. The developer could avoid all of these impacts, minimize changes to the structure of the subdivision, and still build literally hundreds of residential units.

The Commission notes that the total number of residential units would not have to be reduced**.** The subdivision could be redesigned to eliminate the proposed fill at the southeastern bluff edge and remove inappropriately sited development from its currently proposed location within ESHAs or ESHA buffers without reducing the number of units. Redesign of the proposed subdivision can be accomplished by several means and still allow 379 residential units or substantial development on a highly constrained site. Residential design alternatives include, but are not limited to: decreasing the size of the lots; increasing the density of development on the lots (by building duplexes, for example); clustering some of the residential units on fewer lots (multi-family units); deletion or significant reduction of the proposed 2.5-acre private recreation center given the passive recreation opportunity at the on-site nature park and the nearby Bolsa Chica State Beach; etc.

At this point, the Commission cannot definitively state what alternative configurations would be possible. It would be necessary to have a specific development proposal available for review before any final analysis could be performed. The Commission also retains significant discretion in evaluating complex development proposals and deciding whether they can be found to be consistent with Chapter 3 policies or how they could be modified to become consistent with those policies. In extreme cases, development that is inconsistent with one or more Chapter 3 policies may even be approvable, by invoking the balancing approach authorized by Section 30007.5 of the Coastal Act or the prohibition against takings in Section 30010. However, it is clear that a substantial residential subdivision, similar in its fundamental respects to the current proposal, is possible on this site.

Of course, there are other alternatives to developing this site as well, which do not necessarily involve maintaining the fundamental character of the current proposal (that the site be developed as a residential subdivision with a habitat park) at all. There are far too many options for developing this site to attempt to list them here, nor is it the job of this Commission to generate ideas for a private developer’s development of its lot.